THE BUILDER
A JOURNAL FOR THE ARCHITECT & CONSTRUCTOR

VOL. CXLIV. MARCH 3 1933. No. 4700.

Old Carved Niche at the "White Lion," Cobham.

From a sketch by Mr. T. Raffles Davison, F.S.A.

MEETINGS

Friday, *March* 3.

Royal Institute of British Architects. Annual Dinner. At Claridge's Hotel, W.1. 7.15 p.m.

L.C.C. Central School of Arts and Crafts. Mr. A. R. Powys on "Technical Methods to be adopted in the Repair of Old Buildings." 6 p.m.

Institution of Sanitary Engineers. Mr. J. C. Dawes on "Refuse Disposal." At Caxton Hall, S.W.1. 6 p.m.

Faculty of Architects and Surveyors (London and Home Counties Branch). Annual Dinner and Dance. At St. Ermins, St. James's Park, S.W.1. 6.45 p.m.

Monday, *March* 6.

Royal Institute of British Architects. Dance. 8 p.m.

Chartered Surveyors' Institution. Mr. F. Sydney Turner on "Maintenance Claims." 8 p.m.

Royal Society of Arts. Mr. A. Stephenson on "Welding and Allied Processes for Engineering Purposes." 8 p.m.

Tuesday, *March* 7.

Chartered Surveyors' Institution. Annual Dinner. At the Connaught Rooms, W.C.2. 7.30 p.m.

Wednesday, *March* 8.

Royal Institute of British Architects. Mr. H. S. Goodhart Rendel on "Piccadilly." 6 p.m.

Royal Society of Arts. Mr. J. L. Musgrave on "Recent Developments in the Warming and Ventilation of Buildings." 8 p.m.

St. Paul's Ecclesiological Society. Mr. F. Herbert Mansford on "The English Parish Church before the Reformation." Part II—From the Normans to the Black Death. At 9, Conduit-street, W.1. 8 p.m.

Illuminating Engineering Society. Mr. J. W. T. Walsh on "Daylight: Colour (including Artificial Daylight)." At the Polytechnic, Regent-street, W.1. 6 p.m.

Institution of Structural Engineers (Lancashire and Cheshire Branch). Mr. H. A. Whitaker on "Some Aspects of the Mechanical Solution of Influence Diagrams." At the College of Technology, Manchester. 7 p.m.

L.C.C. Central School of Arts and Crafts. Sir Banister Fletcher on "Roman Architecture—VIII." 6 p.m.

Thursday, *March* 9.

Institution of Structural Engineers. Mr. T. J. Gueritte on "Reinforced Concrete Grain Silos." 6.30 p.m.

L.C.C. Geffrye Museum. Mr. F. Skull on "Furniture: Hepplewhite." 7.30 p.m.

Friday, *March* 10.

Town Planning Institute. Mr. H. H. Humphries on "The Town and Country Planning Act and Town Centres." At Caxton Hall, S.W.1. 6 p.m.

Institution of Municipal and County Engineers. Dance, in aid of the Widows' and Orphans' Fund. At the Portman Rooms, Baker-street, W.1. 7.30 p.m.

Monday, *March* 13.

Royal Society of Arts. Mr. A. Stephenson on "Welding and Allied Processes for Engineering Purposes." 8 p.m.

Chartered Surveyors' Institution. Mr. L. M. Perkis on "The Making-up of Private Streets." 6.30 p.m.

Tuesday, *March* 14.

Royal Sanitary Institute. Discussion on "Town and Country Planning." To be opened by Mr. W. T. Creswell, K.C. 5.30 p.m.

Illuminating Engineering Society. Dr. Ing. N. A. Halbertsma on "Progress in Illuminating Engineering Abroad." At the Institution of Mechanical Engineers, S.W.1. 7 p.m.

London Society. Annual Meeting. At the Mansion House, E.C. 4.30 p.m.

Institute of Landscape Architects. Mr. G. H. Jenkins on "Education of a Landscape Architect." At 34, Bedford-square, W.C.1. 3.30 p.m.

Institution of Heating and Ventilating Engineers. Mr. E. Golightly on "Heating and Hot-water Supply in Abattoirs." At the Engineers' Club, Manchester. 7 p.m.

Stained Glass Memorial Window, Broadclyst Parish Church, Devon.

By Mr. Leonard Walker, R.I. (*See page* 364).

"PAPER COMPETITIONS"

A RECENT development in public competitions which has given rise to considerable discussion among architects is known as the "paper competition." The objective of the promoters in this type of competition is usually to obtain a layout plan, with or without elevations, for some scheme of civic improvement, and the feature of special interest is that it departs from the accepted principle that the successful competitor shall be commissioned to carry out the work when it is executed.

At first sight there would seem to be a strange anomaly in inviting architects to prepare schemes for anything which is not to be carried to the stage where their merits are put to the proof; it is—or should be—generally accepted that an architect is chiefly concerned with actual buildings and not merely with the plans and other documents which are the means to this end. Models and specifications would often better express the conception, but, in modern practice, drawings present so many practical advantages that we have come to regard them as invested with perhaps too much interest, forgetting that many a fine building of the past was erected without the aid of the elaborate drawings which the modern architect has to prepare.

It would, of course, be idle to contend that any modern public building, office block, hotel or store, could be designed except by means of plans, sections and elevations, showing steelwork and all the complicated series of pipes, flues, conduits, ventilating ducts, lift shafts and so on, almost *ad infinitum*. But it is also true that much attention to elevations drawn on paper does not necessarily give that feeling of the inevitable "rightness" of the solid mass which is the mark of the true architect. To this extent the "paper" competition is to be discouraged as tending to produce "paper" architecture, except in certain special cases. It presents certain dangers to those essential conditions which have made the English competition system the admiration of our neighbours and the fairest test of architectural skill in existence.

There was a time, not so very long ago, when public competitions were not so generally accepted as a means of finding the best architectural solution for an important public building as is now the case, and it is important to remember that this general acceptance of the architectural competition is due to certain conditions which have always been regarded as essential by the R.I.B.A. Of these the two most important are that the winner should, normally, be entrusted with the execution of the work, and that the assessor or jury should be precluded from taking any part in the competition or the erection of the building which results from it.

This conception of the assessor's duty lies at the root of the whole matter, as it gives an assurance of impartiality both to the public and to the competitor; it sometimes entails a real sacrifice for the assessor, especially in cases where competitions have been abandoned or have proved abortive, and it is to the credit of the profession that cases of doubtful professional conduct are practically unknown. But when we come to consider "paper competitions" these guiding principles become more difficult of application, and it appears doubtful whether the existing regulations can be applied to the special cases which they represent.

Let us take the "paper competition" in its most usual form: the layout of a new street or other civic improvement scheme, where plans and elevations (usually to a small scale) are required. Here it often happens that the land is in many different ownerships or that the leases of existing buildings fall in at different times. In such cases it would obviously be unreasonable to insist that the author of the design placed first by the assessor should carry out the scheme, for (to take only one difficulty) many private owners may be willing to co-operate with the local authority on condition that their own architect should act for them. Thus, if the usual condition (that the execution of the work should be entrusted to the winner of the competition) was applied, the private architect would have a legitimate cause for complaint.

Here the proper course would seem to be that the successful competitor should act in an advisory capacity with regard to such parts of the reconstruction of the property owned by the private architect's client as are included in the accepted scheme. It may sometimes happen that this type of competition is won by a young man without experience and that, in consequence, the promoters suggest that the assessor should be associated with him in carrying out the scheme.

This may be a satisfactory solution of the problem from the point of view of the promoters, but from every other point of view it is undesirable. Thus we arrive at the solution which seems a common-sense one in such competitions: that the conditions should clearly state that the promoters will not entrust the execution of the work to the successful competitor. If this is done we do not think competitors can have cause for complaint as there is no ambiguity about the object of the competition, which is merely to provide a scheme, and not a completed building or buildings. Whether such a course is likely to produce good architecture is another matter: it seems somewhat doubtful, because the man who can best interpret the small scale plans and elevations is evidently the one who first designed them—which brings us back to the inherent defect of the "paper competitions."

Another type of paper competition, of which more will be heard in the future, is the replanning of portions of the built-up area of our towns and cities. Here there can be no doubt that the ordinary standard conditions do not apply, as the main concern is town planning, except in cases where architectural control includes the rebuilding of certain streets, etc., as in the first case we have quoted. But as architects are all potential and, in many cases, actual "town planners," the proper conduct of such competitions is of interest to them.

As was pointed out by a delegate to the recent International Congress of Contemporary Art, it often happens in such competitions that no single competitor submits an ideal scheme for the whole area, but that a certain number have each solved one or more of the problems better than the rest. It was suggested that, in such cases, the principle of entrusting the execution of the plan to the successful competitor could be met—after the premiums had been duly awarded on the basis of relative merit—by inviting the authors of the premiated designs to collaborate in the preparation and execution of a joint scheme, which would embody the special points which the jury or the assessor had considered in making the awards.

This arrangement has, we understand, been adopted in Italy and has proved satisfactory: it has the merit of entrusting the execution of the work to those who have visualised the completed scheme, and is more likely to produce a satisfactory solution than when the execution is entrusted to the officials of the local authority (however able and skilled they may be), because they have not been responsible for the original conception. Of the various other types of "paper competitions" little need be said here except that most of them seem to present certain dangers and pitfalls for architects and builders alike, more especially when estimates of cost are included, and when the copyright of the design passes from the author to the promoters.

The whole question is one of considerable importance to architects and it would appear to be desirable that a special form of regulations should be prepared by the R.I.B.A. in consultation with the Town Planning Institute and other interested parties, at as early a date as possible, as a guide both to promoters and competitors, and to prevent abuses which would tend to discredit the competition system as a whole.

NOTES

The Burden of Rates.

A VERY strong case is being made out in the Press in favour of more lenient consideration for assessments and valuations. It is most unfair that assessments should be forced up directly anything urgently necessary is done to property. Surely it should be possible for all our authorities to look with a more lenient eye on the plight of those who are being assessed and taxed out of existence. Rates and taxes become so onerous that even where a householder owns his house he seems in many cases almost as badly off as a tenant, or even worse off.

The Government and Housing Policy.

LITTLE is added to the fund of common knowledge by the Minister of Health's speech to the Burnley Building Society, reported on page 380. Sir E. Hilton Young reiterated points on which most people are agreed, the main fact being that the housing policy over the last 14 years, while providing many fine municipal estates, has signally failed either to meet the need for houses to let to the poorest type of workers or to solve the problem of slum-clearance. The Minister re-stated his opinion that the main cause of the failure has been the system of general subsidy which has tended to keep up costs, and this belief has formed the main plank of the Housing Bill, which aims principally at the complete abolition of subsidies other than for slum clearance work and permitting the normal sources of supply—the building trade and the public investment market—to supply the needs. The subject is referred to by Mr. J. P. Orr in his article on "Greater London Housing," on p. 382.

The Economic Wage.

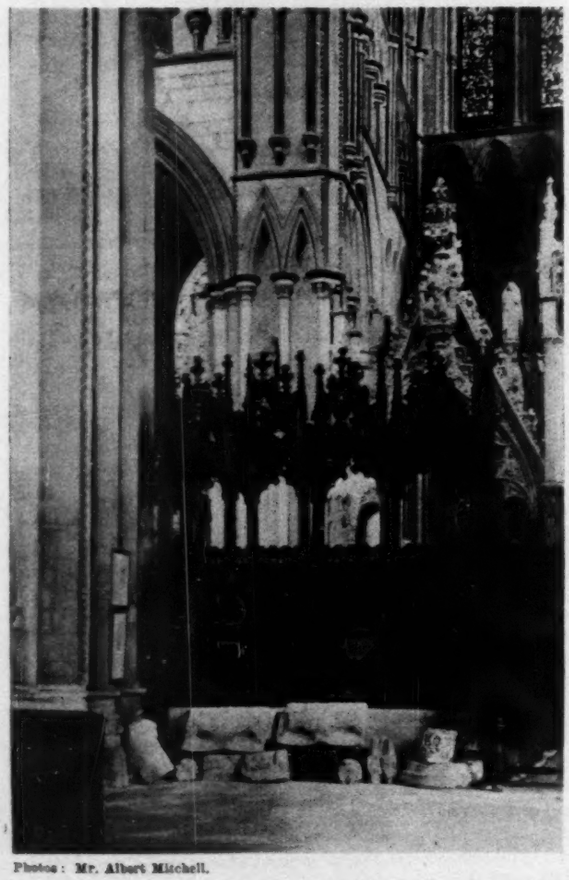
IN a recent issue of the *Yorkshire Observer*, Mr. A. H. Gibson, the well-known economist, makes some interesting suggestions about "the defiance of the economic wage—a defiance that has cost this country dearly during recent years." He puts forward the suggestion that there would seem to be some justification for the view held in some quarters that the present number of unemployed in this country might not have reached present dimensions if many of those engaged in employment had been content to accept an economic wage, while a more even distribution of employment and wages might in its turn have prevented some part of the decline in purchasing power on the part of the mass of the community.

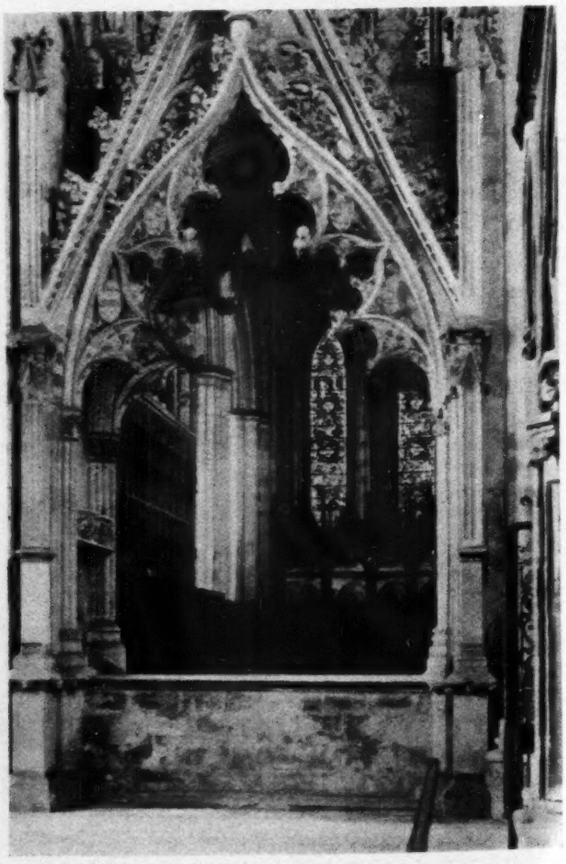
The Other Side.

THIS view appears to be steadily gaining ground, but on the other hand, it is a view that is not only stoutly opposed by a section of the Press, but is completely contradicted by a demand for an ever higher artificial wage basis. The truth must be faced, that the whole subject has stiffened not only into a jargon, but into an obvious appeal for popularity. And that is, in short, the measure of the real danger to the country. There has been no serious attempt to explore the significance of the real purchasing power of the consumer in its relationship to an artificial wage basis. It is a subject that has become too much involved in mere polemics.

Gas Companies and Housing Authorities.

BILLS are to be brought before the present session of Parliament which are intended to make it illegal for housing authorities to lay down which form of heat, light, power and energy shall be used by their tenants. The Bills are promoted by the Gas Light and Coke Company and the Commercial Gas Company. They allege that the councils of certain Metropolitan and county boroughs operating electricity undertakings are either preventing tenants from obtaining any gas supply or are limiting the purposes for which a supply can be provided. The problem arises particularly with authorities who are carrying through extensive housing schemes. The Bills describe it as inexpedient that the occupiers of houses erected out of public funds should





Photos: Mr. Albert Mitchell.

Beverley Minster: Details.

be unable to obtain gas or should be limited in the uses for which a supply may be had, and imply that the gas companies are hampered in carrying out the powers granted them by Parliament. In addition to preventing such housing authorities from specifying the form of heat, light and power in future cases, the Bills also propose to declare null and void any existing conditions limiting the type of supply available. Some eighteen London Boroughs are joining in a petition against the Bills.

Architectural Education for Children. REASONS for the education of children in architectural matters have frequently been stated by lecturers and others, and much good work has been done in the form of the award of prizes for essays on architectural subjects. So far, however, such work has been initiated by architects, and it is encouraging, therefore, to see that the *Children's Newspaper* devoted a column in its issue for February 18 to the question of Carlton House-terrace and to giving the Royal Fine Arts Commission executive power. The Government is criticised for the part it has played in the matter, nor does the individual architect escape, as the following will show, though, of course, the argument is based on faulty premises:—"The Royal Academy has a Hanging Committee. What are its functions? One of them is to make certain that one man's work does not kill the beauty of his brother artist's work on the walls, but rather that it should enhance it. Do our architects consider this? They do not. Look at the muddled medley of the good buildings on the site of St. Martin's-le-Grand and see what has happened. Even Sir Edwin Lutyens himself placed his magnificent Seamen's Peace Memorial on Tower Hill in such a way that its arch looked on to an ugly building with a staring advertisement on its roof."

"Finds" at the Roman Villa, Southwick. SOME time ago the Roman Villa at Southwick, through the generosity of an anonymous donor, was acquired for the town and placed under the supervision of the Sussex Archæological Society. This was clearly a very extensive villa, going beyond the limits of the acquired site, and the land outside is now being developed for building. Excavations were, however, permitted before houses were erected; and these resulted last week in the discovery not only of fine ceramic work, but of two beautiful silver coins (*denarii*) in good preservation, one certainly of the Emperor Titus, with a fine profile portrait and the legend IMP. TITUS. CAESAR (the rest is rubbed), and the other, even more perfect, considered to be of Domitian, with reverse of a female figure (?Peace) bearing cornucopia. The reverse on the Titus coin is clear, but very curious in design, and needs expert examination.

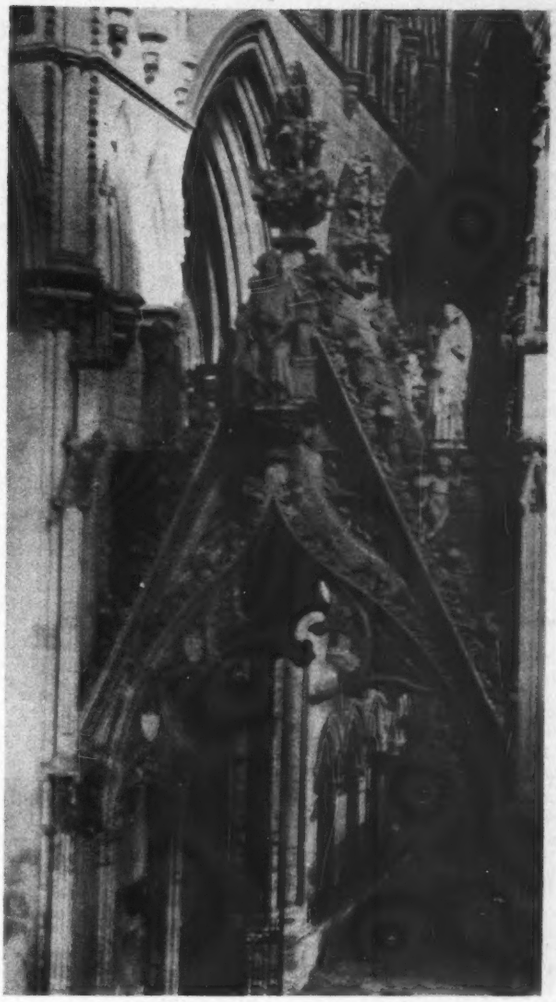


Photo: Mr. Albert Mitchell.

Beverley Minster: Detail of Canopy Work.

The East Coast Development. WHAT Brighton is to London in the summer, so is Skegness to the Midland and Eastern counties. Yet one needs to visit Skegness to realise how quickly it has developed into one of the finest seaside holiday resorts in the country. Skegness is now almost unrecognisable to pre-war visitors, for £130,000 has been spent on its sea front. The latest improvement is a Sun Castle Solarium, built amidst wonderful gardens which, we are told, are unrivalled in Britain, containing plants and blooms which cannot be found elsewhere in the country. This sun castle is glazed with special glass to pass on the ultra-violet rays of the sun, and every evening specially designed ultra-violet ray lamps are provided to flood the lounge with health-giving rays. Visitors can use this sun castle all the year round, and special costumes are provided to enable them to obtain the maximum benefit from the rays. The latest development is a proposal to build on the only remaining vacant site in the central promenade. A scheme for a large cinema with flats and shops has been approved, and is expected to be proceeded with shortly. It seems only a few years ago that Skegness was a small unattractive seaside-town, and now, after extensive building developments, it is one of the most attractive and enterprising resorts in the country.

French Art in Park Lane. ANOTHER opportunity has occurred of seeing French art and its all pervading charm. The place in the world of art which the graces of decorative art and painting achieved during the reigns of Louis XIV, XV and XVI, have made an ineffaceable impression in our world, and, quite apart from the world-wide copying of this master-process, have unusually influenced the thoughts of creating artists in every sphere of life. There may be many amongst us who feel there are higher and better phases of art than those which came into vogue to add to the fancy and charm of a light and frivolous world, but what the French did met with a world-wide and eager response amongst artists and the public. It was a great pleasure to see gathered together in Sir Philip Sassoon's mansion such a large number of typical examples of the productions of the reigns of the three Louis's and yet, extensive as this collection was, it but touched the fringe of the subject.

GENERAL NEWS

Sir Austen Chamberlain and Housing.

Sir Austen Chamberlain is to speak next Monday (March 6) at a public meeting in Birmingham, organised by the Birmingham C.O.P.E.C. House Improvement Society, Ltd. This society has reconditioned old houses and has provided accommodation in 258 houses and flats.

Public Lectures on Architecture.

On Wednesday, March 8, at 6 p.m., Mr. H. S. Goodhart Rendel will open a series of six one-hour lectures for the general public at the R.I.B.A. on "How to Look at London." Mr. Goodhart Rendel's lecture has the title "Piccadilly"; the subsequent lectures will deal with a variety of types of buildings, and the series will close with a lecture by Mr. A. B. Knapp-Fisher on "What London Might Be." Admission is free.

Special Committee for Public Relations.

In addition to the list of subscribers to this Fund, given in former issues, the following contributions are announced :—

	£	s.	d.
Walsall and District Brick Makers' Association	3	3	0
Northern Brick Federation ...	100	0	0
Birmingham Brick Masters' Association	10	10	0

The total now received is £2,205 10s.

R.A. Summer Exhibition.

The following days have been appointed for receiving work intended for the Royal Academy Summer Exhibition :—Water colours, pastels, miniatures, black-and-white drawings and architectural drawings—Friday, March 24; oil paintings—Saturday, March 25, and Monday, March 27; sculpture—Tuesday, March 28. Hours for the reception of work, 8 a.m. to 10 p.m., except the Saturday, 8 a.m. to 2 p.m. Not more than three works may be sent by any one artist. All works must be delivered unpacked at the Burlington-gardens entrance. Labels and forms can now be obtained from the Secretary, Royal Academy of Arts, Piccadilly, W.1. The Exhibition opens on May 1 and closes on August 7.

Stained-glass Windows, Broadclyst, Devon.

These windows, by Mr. Leonard Walker, R.I., have been inserted in Broadclyst Parish Church, Devon, in memory of Miss Ellen Acland (the twelve-years-old daughter of Sir Francis and Lady Acland), who was the victim of a cycling accident in 1924. They comprise three main lights, the centre one representing the Virgin on her knees, adoring the infant Saviour, with angels above showering rose petals. Those on either side have figures symbolising hope and faith, carrying a flowering branch and a lamp. There is a medallion at the foot of each light. The artist's aim has been to secure a harmonious pattern of coloured glass, agreeing happily with the architectural shapes, to which the theme is made to conform.

Rome Scholarship in Architecture, 1933.

The Faculty of Architecture of the British School at Rome have admitted the following candidates to the competition for the Rome Scholarship in Architecture, 1933 :—

P. B. Dunham, Bartlett School of Architecture, University of London.

J. A. Pinckheard, Architectural Association.

D. McIntyre and J. C. Clavering, Armstrong College, University of Durham.

J. R. Baxter, A. G. S. Fidler, B.Arch., and E. Farrar, Liverpool School of Architecture.

J. T. Cahill, B.Arch., University of Manchester.

G. H. Lawrence, A. Reiach and P. H. D. Ronaldson, Edinburgh College of Art.

Appointments.

Mr. R. A. Cordingley, A.R.I.B.A., has been appointed by the Council to the Professorship of Architecture and as Director of the School of Architecture at Manchester University, in succession to Professor A. C. Dickie, who has occupied the post since 1912.

Mr. H. F. Cronin, M.C., B.Sc., has been appointed Deputy Chief Engineer to the Metropolitan Water Board.

Mr. Handel Kay, who was appointed borough engineer with the Thornaby Town Council about 12 months ago, has handed in his resignation. He has been appointed surveyor with the Prestwich Urban Council, Lancashire.

Mr. Albert E. Brookes, chartered civil engineer, 11, Victoria-street, S.W.1, has been appointed to prepare town-planning schemes for Mid-Cheshire (No. 5) Regional Town Planning Joint Committee. The scheme is to be carried out within a period of five years.

Edinburgh Architects and Official Work.

A memorandum has been submitted by Edinburgh Architectural Association to Edinburgh Town Council suggesting that some of the work of the City Architect's Department might be deputed to outside architects. It is stated that the profession of architecture is suffering severely from the existing depression, and the result has been that, almost without exception, employers have been under the necessity of reducing their staffs to the minimum.

It is recognised by the Association that a very considerable amount of the architectural work of the city must, of necessity, be concentrated in the City Architect's Department. There is, however, another class of work such as alterations of a major nature upon existing buildings, entirely new buildings, housing schemes and the like. As indicating the extent of this work, it is pointed out that out of approximately 600 full petitions which have come before the Dean of Guild Court in the course of the past twelve months, fully ten per cent. of these have been on the application of the city acting through the City Architect, while the cost of the work covered by these petitions might probably be accepted—although actual figures are not available—as representing the greater part of the entire volume of the work passing through the court. The Association submits for the consideration of the Town Council the possibility of the employment of outside practising architects in the city for the carrying out of at least a certain proportion of the work undertaken by the City Architect's Department.

COMPETITION NEWS

Surbiton Hospital Competition.

Owing to the unemployment in the profession, the promoters, the governors of the Surbiton Hospital, have decided to make the competition for new hospital premises at Ewell-road an open one. There will be premiums of £120, £75, £50 and £25. Conditions are in the course of preparation. Mr. C. Ernest Elcock, F.R.I.B.A., 60, Strand, W.C.2, is assessor.

Municipal Offices and Baths, Prestwick.

Prestwick Town Council invite architects resident in Great Britain, who have been in practice, either as individuals or as partners in a firm, for at least twelve months prior to March 1, 1933, to submit designs for proposed Burgh Chambers, Municipal Offices and Baths in open competition. The applications for conditions of competition and plan of site should be made to Mr. William Shaw, Town Clerk, Burgh Chambers, Prestwick, Ayrshire, before March 15, together with a deposit of £2 2s. by crossed cheque. Premiums of £200, £100 and £50 will be awarded.

Mr. A. Graham Henderson, F.R.I.B.A., President of the Glasgow Institute of Architects, is assessor. All designs must be sent not later than May 8.

"THE BUILDER" DEBATE

LIX.—OFFICIAL ARCHITECTS AND THE R.I.B.A.

SIR,—While cordially agreeing with "Positive's" opinions as to the integrity of, and good work done by, the official architects of the day, I do not think he has made out his case in support of their share of office in the administration of the Institute. The function of the Institute is a dual one: first, to protect the interests of its members; and, secondly, to promote fine architecture. Let us consider in what way either of these is assisted by the co-operation of official architects.

As to the protection of members' interests, it will probably be conceded that the interests of the official architect and of the private practitioner are somewhat divergent. Those of the former are in the direction of reinforcing the principle of official architectural staffs, and of maintaining a field of work in which those staffs can be exercised. Those of the private architect are exactly opposite, and consist in the increase of the free field of practice, with a reduction in the scope and amount of work under official control. How one body can respect both these interests at one and the same time is a mystery; and it can only be assumed that either the Institute respects both these antagonistic interests by a compromise which leaves both sides dissatisfied, or that it neglects one side in the interests of the others. If the former is the case, it would appear very unsatisfactory to both parties; if the latter, it must surely mean that with an overwhelming majority among its members in private practice, it must be the official architect who suffers, or that, if the bias is the other way, official policy must be running counter to the interests of the majority. It must surely be obvious that the "bloc" of official architects who hold office is more an embarrassment than a help to both the ordinary and official member.

In any case, how can the interests of the official architect be furthered by membership in any unofficial body? The official architect is the servant of the public, governed by the State, and influenced by bureaucratic policy. No ruling of the Institute could possibly affect the terms of service under which officials earn their salaries and pensions. It would appear, therefore, that no ill results could very well follow if this type of member ceased to take an active part in the government of the profession.

There remains the other function which the Institute has to fulfil, the fostering of fine architecture. There are many official architects who are well qualified to take their part in this task, and if there was any shortage of men fit to handle this subject, it would be very desirable that the ranks should be reinforced with men of the right stamp, whatever their means of earning a living out of the practice of architecture. But is there any such shortage? The answer is surely very plain: and being so plain, does it not remove yet another argument against excluding the official architect from office?

I have endeavoured to show: (1) That whereas the official architect in office at the Institute may unwillingly prejudice the interests of the private architect, he cannot well further the interests of his own official colleagues; (2) that his exclusion from office would exercise no injustice upon him and his kind; and (3) that there is no need to reinforce the ranks of private architects with official architects to further the development of fine architecture.

If I have made out my case sufficiently clearly, the course of action is clear. The Institute should be remodelled to give added strength to the influence of the private architect, upon whom rests the task of maintaining a live architecture in this and future generations.

NEGATIVE.

CORRESPONDENCE

What Next?

SIR,—Might I crave the hospitality of your columns to draw the attention of your architectural readers to what appears to me to be a very serious constitutional blunder on the part of the Council of an Association affiliated to the R.I.B.A. The said Council has sent a petition to the Council of the county town appealing to be allowed to work "under the city architect."

This appeal, I believe, was sent out by the said Council without consulting the members of the Association or area it represented. Without occupying valuable space with all the details of this unconstitutional act, let me state as briefly as possible the principles involved.

The said Council contains among its members the following :—

One Chief Architect to the Office of Works.
One Chief Architect to the Board of Health.
One Chief Draughtsman to the War Office.
One Chief Draughtsman to the Royal Commission of Ancient Monuments.
One Salaried Architect to Church Trustees.
One Junior Draughtsman in the City Architect's Office.
One W.S.
Ten F.R.I.B.A.s.
Two A.R.I.B.A.s.
One Royal Academician.
And one Baronet.

Without consulting the wishes of the Association they represent, these men have sent the begging petition referred to. I am not a member of the said Association (for which I am now thankful), but a loyal member of the Institute, and I denounce the action of this Council and wish to protest against the terms of the petition. I have fought for 25 years to curtail the activities of the official architect, which are a menace to the progress of architecture.

Here we have the spectacle of a petition signed by at least six men who occupy official, protected posts, eligible for a pension, begging for work for men who have never asked them to beg and who have never begged, but demand as ratepayers their right to be employed as independent architects for local commissions. The whole affair is an insult to the intelligence of the private practising architect. The public are amused, and non-Council members have expressed their indignation to me.

Let us examine briefly what will happen if the said town council agrees to let the architects in this area (over 300) work under the city architect.

First: As Corporation officials, any architect working under the city architect is precluded from carrying on a private practice. (See recent by-law, R.I.B.A.)

Second: He would lose his status as a Fellow of the R.I.B.A.

Third: Think of the possible scramble, toadying and wire-pulling to secure commissions "under the city architect."

I hope we have not heard the last of this, and that the stupidity of this move on the part of salaried, protected architects to degrade and humiliate free men will meet with well-merited ridicule, and disciplinary action on the part of the Institute. What has the Institute to say about it?

If this custom spreads to other towns we may have Fellows of the Institute working under some unqualified city "architect" as a very reasonable possibility. Of what avail is Registration under such conditions?

Let us analyse the actual position in a sentence. Here we have the servants (draughtsmen of official architects) of servants of the ratepayers (the private practising architect, being a ratepayer, is the employer of official architects) begging the upper servants for the crumbs from the upper servants' hall for the masters!

So much for the official architect on the R.I.B.A. or any other council. We may well ask—What next? WILLIAM DAVIDSON.

Working-class Cottage Competition.

SIR,—May I claim the hospitality of your columns to reply to the interesting criticism of the plans issued by the Building Centre as the basis of a competition for a working-class cottage to be let at an economic rent?

Mr. Lloyd's main criticism of the plan is the size of two of the bedrooms, and he suggests that the Building Centre is endeavouring to lower the standard hitherto regarded as a minimum for a three-bedroomed cottage. Nothing is further from our minds. Even the Ministry of Health's empirical requirements for the subsidised cottage cannot be regarded as unalterable as the Laws of the Medes and Persians, and in view of the crying need for good cottages at an economic rent, we considered that this small reduction in the size of the two larger bedrooms would be justified, and we have no reason to believe that the Ministry of Health would not take this view if the result does produce a cottage at an economic rent.

It must be remembered that enlarging the bedrooms also, of necessity, means enlarging the ground-floor rooms' dimensions to a point which is clearly unnecessary. When many hundreds of thousands of our people are living with their families in one or two rooms under the most distressful conditions, at often excessive rentals, we feel that the provision of a cottage such as we suggest would be a godsend to them. The other criticisms of Mr. Lloyd are, as he will no doubt agree, minor aspects of the problem which the competitors have a free hand to deal with.

The Government having decided to drop the subsidy, and having invited the building industry to endeavour to solve this grave problem on economic lines, it seemed to us at the Building Centre an excellent opportunity to hold this competition open to everyone, and with the earnest hope that competitors will be able, if freed from the trammels of hard-and-fast rules, to make a valuable contribution to the problem.

I am sure that Mr. Alwyn Lloyd appreciates that we are all in complete sympathy with his view that the highest standard of living accommodation possible should be provided for everyone, but to thousands of families the provision of a cottage such as we suggest would be raising their standard of living to a point immeasurably higher than they have yet experienced, and we feel certain, from information we have already received, that the public will be prepared to build such cottages when the results of our competition are made known, if it proves that they can let them at economic rents, which, in many cases, will be lower than many working-class families are paying at the present time for the most abominable accommodation.

MAURICE E. WEBB.
The Building Centre, Ltd.

Economy in Housing.

SIR,—In view of the urgent need for economy in building small houses, may I draw attention to the advisability of revising some of the local building by-laws? For instance, why should not timber be used for the construction and covering of external walls of country cottages? In many urban districts wood is only allowed if the spaces between and behind the timbers are filled in with brickwork, thus making the cost prohibitive; weatherboarding is not allowed at all, nor are Canadian cedar shingles. Another unreasonable by-law insists on 8 ft. as the least height for a room, and if wholly or partly in a roof, 8 ft. over two-thirds of the floor area and not less than 5 ft. high where the sloping ceiling begins.

Last summer I spent a happy month in what had been a labourer's country cottage, said to have been built for £100 just before the War, and this I consider quite possible. It has a large living room, a small bedroom, scullery, larder and w.c. on the ground floor and two good bedrooms above. It is constructed of fir timber on a brick foundation, is covered externally with creosoted deal weather-boarding and has a pantile roof. Internally the walls and ceilings are plastered, and there are four fireplaces leading to a single chimney stack on the roof. The lower rooms are 7½ ft. high, the upper 7 ft. 4 in. in the centre, and 3½ ft. at the sides, the windows being in gables. All the rooms are well ventilated and the width of the bedrooms gives plenty of space for furniture against the low walls. Had the ceiling been made 8 ft. high and two-thirds of it flat to comply with the by-laws, the room would have been only 9 ft. wide instead of 15, and the side-walls 5 ft. high instead of 3½ ft.

JOHN E. NEWBERRY, F.R.I.B.A.

The Mansion House.

SIR,—When this building was reopened after the alterations the City Corporation prepared an official pamphlet. The following is an extract, under the heading, "Some of the people responsible for the work." It states: "Mr. Sydney Perks, F.R.I.B.A., F.S.A., for the architectural work from the date of the first reference from the Court to the Committee up to the time of his retirement from the office of City Architect and Surveyor," and during that period all the plans and working drawings were made in my office. When I retired the alterations and additions were almost entirely completed, the Corporation had accepted Mr. S. Laughton's scheme of decoration, and his work was well in hand.

Sevenoaks. SYDNEY PERKS.

Factories.

SIR,—The idea seems to have got abroad that new buildings are a luxury. From my own experience, which has to do mainly with factory building, I can state quite definitely that it pays the owner to replace an obsolete factory with a new, up-to-date one.

I have been associated with the building of new factories in almost every part of the country during the past year or two, and in every case the new building has resulted in diminished costs and increased production. One owner in the Midlands told me that after nine months in his new building his costs of production had dropped by 20 per cent., his output itself had increased both in quantity and quality.

At least 75 per cent. of our factories are obsolete, and if we are to prosper in the markets of the world there is no doubt whatever that this state of affairs must be remedied. Wise manufacturers are setting their house in order now when the costs of building are at rock-bottom. It does not take the eye of an expert to see that the new factories are the prosperous ones. THOS. WALLIS.

Wages and Houses.

SIR,—The debate between Lieut.-Col. Sir Francis Fremantle and Mr. Coppock, published in last week's issue of *The Builder*, showed one of the causes of the non-provision of working-class houses. Mr. Coppock, after years of experience in the building trade, showed by his figures that lowering wages does not help to provide houses. The price of land for building houses has increased enormously. We have got to get this lowered first, and only by legislation can it be done.

Every craftsman in the building trade has had his wages reduced since 1920, but his rent has not been lessened. He is paying more for the right to live in rooms or houses in proportion to his wages. If craftsmen received an all-round increase in wages it should not increase the price of a £400 house.

Suppose the building societies advanced £400 to build a house, irrespective of the price of the land, which should be £100. A rental of 9s. per week over 40 years amounts to £936, leaving a profit of £436. Add to this the £40,000,000 the Government is paying building workers in dole and relief to the out-of-work, and the solution of the housing problem should be simple.

Clapham Junction, S.W. H. M.

[Does our correspondent's suggestion imply that no interest should be paid on the capital advanced? We understand that some philanthropic societies are raising money for housing purposes without interest.]

[See also page 389.]

THE ARCHITECTURAL ASSOCIATION

THE ELECTRIC GRID SYSTEM.

At Monday evening's meeting of the Architectural Association at 36, Bedford-square, W.C., a paper entitled "The Electric Grid Supply and its Purpose" was given by Sir Andrew Duncan, M.A. Mr. A. B. Knapp-Fisher (president) occupied the chair.

The preliminary business included passing votes of condolence with the relatives of the late P. W. Barnett, P. B. Tubbs and John Murray.

The lecturer said that the national grid towers were now to be seen in almost every part of the country. Within the next few months they would have completed practically every link in the chain of transmission lines that would stretch from the Grampians to the English Channel. With the completion of this network a fresh factor in national economy was emerging into practical effectiveness, and we were entering upon a new era in electrical development in this country.

By way of historical background and as a means of more readily understanding what the grid was, the lecturer recalled that public electricity supply had really grown up within the lifetime of the youngest person there. In 1896 there were only about 60 public supply undertakings in the country with an output of less than 36,000,000 units, and by 1926 there were approximately 600 undertakings with an output of 7,000,000,000 units. These figures, taken by themselves, would betoken great expansion. Our system, however, was in no national or regional sense a deliberately planned one; but just an aggregation of independent and isolated undertakings each producing its own requirements and pursuing an unco-ordinated and unrelated policy of development.

Defects of Piecemeal Development.

The defects of the system had exercised the minds of thoughtful people in the industry, but pre-war legislation was halting and parochial, and altogether strangely unhelpful as one looked back on it. In the war time period of rapid and special industrial expansion the weakness of our haphazard system, with its variety of pressures and frequencies, its lack of inter-connection and the difficulty of procuring co-operation between adjoining authorities, were glaringly revealed. Several special committees were constituted to consider the various aspects of the situation, leading eventually to the Act of 1919, which set up the Electricity Commissioners for the purpose of promoting, regulating and supervising the supply of electricity. Many regional schemes for centralising the production of electricity in a relatively small number of large stations under the ægis of joint electrical authorities were investigated by the Commissioners, but although some progress was made the cohesion necessary to give executive force to the schemes was lacking for want of compulsory powers; moreoever, technical development encouraged the view that the best plan was to envisage the whole country as one area for the purposes of generation.

Eventually, in 1925, a committee was set up, presided over by Lord Weir and with the Chairman of the Electricity Commissioners—Sir John Snell—as technical adviser: "To review the national problem of the supply of electrical energy and to present a report on the broad lines of policy which should be adopted to ensure its most efficient and effective development." The committee adopted one central objective at which to aim. "The terms of the reference," they said, "the necessities of the case and the whole course of our investigations have led us to adopt as this definite goal the reduction in price and the greatest availability of electrical energy to the consumer, ranging from the largest industrial user to the artisan in his home."

Weir Committee Recommendations.

The committee recommended the establishment of a national system of main transmission lines, designated the "gridiron" for the purpose of inter-connecting the systems of all the public supply authorities in the country, and enabling them to be supplied on a wholesale basis with electricity produced at the most efficient stations. They also recommended the setting up of an executive body—the Central Electricity Board—which should be responsible for the erection and operation of the grid, and which should direct the operations of the generating stations selected to feed the grid. They further recommended that standardisation of the frequency of the alternating current systems in the country should be undertaken as part of this comprehensive scheme, since, in order to make a national grid fully effective, there must be the freest interchange of energy on a uniform gauge. The Weir Committee's recommendations were given effect to in the Electricity (Supply) Act, which ultimately became law in December, 1926, and in March, 1927, the Central Electricity Board was constituted.

The establishment of the grid system might shortly be described as a means of rationalising the production of electricity for the purposes of public supply, and its transmission to the various sources of public supply. Whatever, therefore, were the limitations or hesitations of earlier legislation in electrical matters, Parliament did in the 1926 Act deliberately plan for the production of electricity on a comprehensive national scale. This planning, it must be remembered, had to be superimposed upon rather than immediately substituted for the existing system. It would be one thing to town-plan a new London on virgin soil and quite another to transform London by gradually dovetailing the existing scheme of things into a new.

For ease of management and operation, as well as of construction, the country had been divided into ten areas, and schemes had been developed in all those areas—with the exception of North Scotland. Although the grid would be operated in areas, all the areas were themselves inter-connected and so dovetailed into each other as to form in every sense a national grid. The tariffs for each area, too, would vary within such narrow limits from the beginning as to be capable of ultimately linking up to a full degree of uniformity.

Expected Results.

Four broad direct results would follow from the new scheme of things: (1) The average cost of producing electricity for the country as a whole would be substantially reduced. Under the system of independent generation of the past it had been necessary for each undertaking to carry substantial surplus plant in reserve for breakdowns. When the grid scheme was in full operation it would be possible to reduce the proportion of spare plant so considerably that the resultant saving of capital would during the next ten years be in excess of the whole capital cost of the grid. (2) The bulk of the distributing authorities would be freed not only from the problems of generation, but also from the large capital cost involved in maintaining their own plant, and would for the future be free to devote their whole energies to the intensive development of their distribution system, their sales and their services. This process had, in fact, been operating during the last few years, as the grid had been developing. (3) Electricity would become much more generally and much more quickly available in areas not already developed, and the undertakings developing those territories would be able to buy in bulk from the grid at prices which compared favourably with cost at large generating stations. The cost of regional transmission for distribution would be reduced, too, as a result of the additional grid points at which supply could be taken. Already a considerable area of rural and agricultural territory had been opened up by receiving temporary supplies from accelerated portions of the grid, pending completion of the scheme. (4) Industry would be afforded the assurance of a reliable public electrical service in whatever part of the country it might locate itself. Already they had been able, in co-operation with the supply undertakings, to secure large industrial loads for which the local undertaking could not, on its own, have become responsible. The flexibility which the system afforded would prove to be of incalculable advantage as trade revived and industrial load grew again.

Discussion.

Mr. G. Grey Wornum said that to have got on paper all the ramifications of some six hundred electricity producing plants throughout the country, and thought out the best arrangement for making all those plants work together, was a colossal work to have brought near completion in a few years. Sir Andrew had told him that the Electricity Board had allowed themselves eight years in which to do the work, but it was being completed in six. But why had the central board decided to supply alternating rather than direct current? Since he had been changed over to alternating current his wireless had never worked so well as it used to do, and his electric dinner lift never seemed to go.

Mr. Charles H. Merz said that the foundation for a proper supply of electricity for the whole country had been truly laid. It remained to increase the consumption of electricity, and for that electrical engineers depended very largely on architects. Electrical engineers had so transformed the possibility of the modern house that it would not be very long before people would refuse to live in the old non-electrical house. Therefore a great many more new houses would have to be built. Electrical engineers looked to architects to take advantage of the new method, and they would welcome anything architects could do in the way of designing fittings which would not look like imitations of something else.

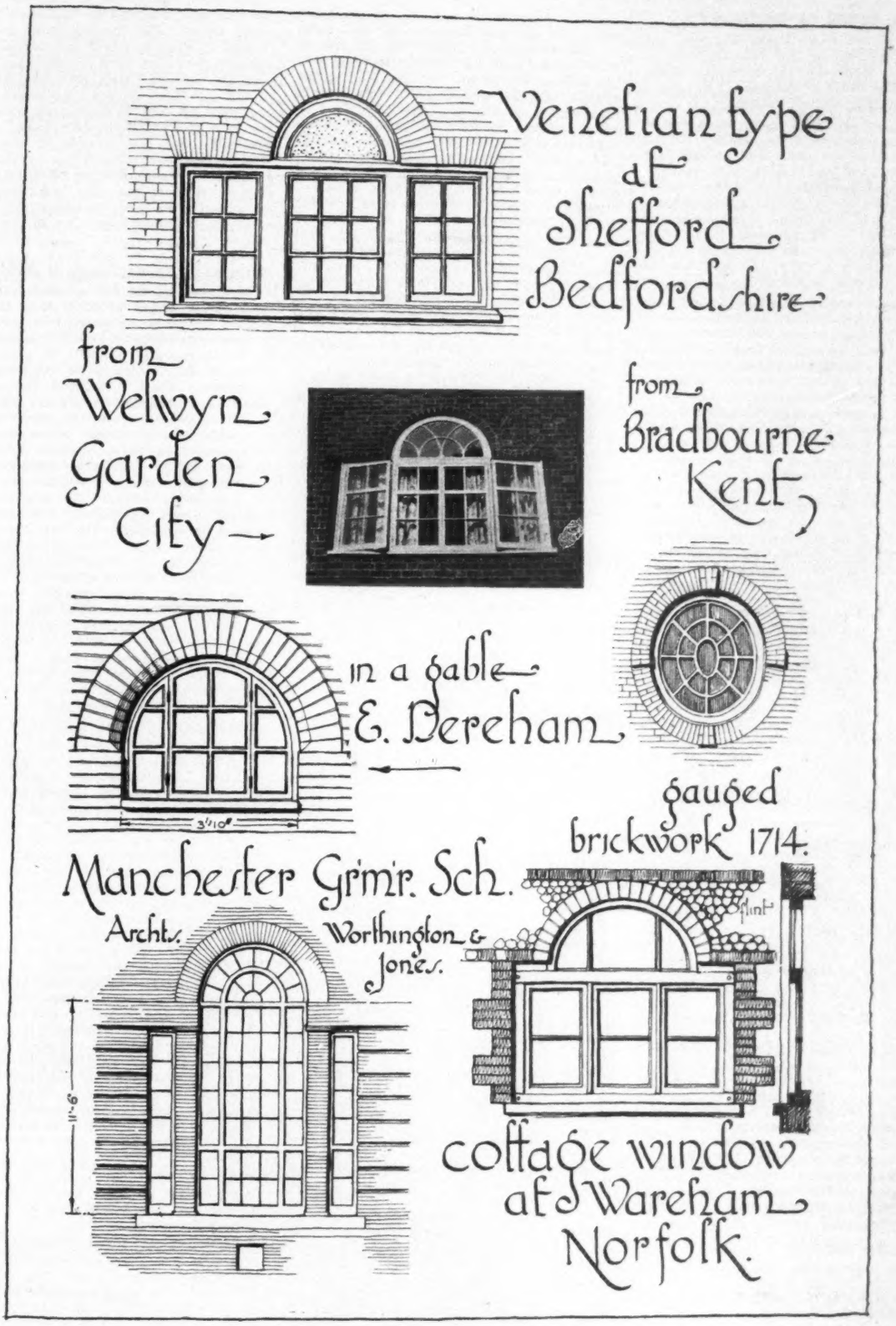
Sir John Brooke said engineers had put at the disposal of architects the means of beautifying the cities. By producing electricity on a national scale we were able to make the most effective use of the latest developments. If architects would think of the grid as the first really effective bit of town and country planning they would come into sympathy with the engineers. The engineers were already in sympathy with the architects.

Sir Archibald Page answered the question that had been asked by Mr. Wornum. He said all electric current was alternating to begin with. When current had to be transmitted very great distances it involved working with enormous pressure, and this could not be done with direct current. England's demand was for a cheap and abundant supply of electricity.

Mr. John Gloag said that a structural revolution had taken place, and to-day thick walls had no function in building. With electricity, we could have tall, thin-walled buildings well heated. On the question of the grid, the pylons that were objected to as spoiling the beauty of the countryside were invisible at a quarter of a mile's distance, and the cables that strode over them were going to do more than any society for the beautifying of England; they would get rid of the industrial smoke cloud and would bring a clean and beautiful England. It might occur to the people who disliked the look of pylons that cheap electricity would bring such an increase of prosperity to this country that we might have money enough to pull the towers down and bury the cables.

Mr. H. T. Young having spoken, the Chairman said that, as representing the C.P.R.E., he was glad to see Sir Andrew recognised that science must go side by side with amenity. He wished to gain the use of electricity without losing the beauty that had been handed down to us.

A vote of thanks was passed to the lecturer.



English Detail.—8. Windows.

WEST YORKSHIRE SOCIETY OF ARCHITECTS

"THE SENSE OF HARMONY."

Mr. B. R. Gribbon, President, took the chair at a meeting of this Society, held at Halifax, on February 16, when a lecture entitled "The Sense of Harmony" was given by the Hon. Humphrey Pakington.

The lecturer said that when we spoke of harmony in architecture we usually referred to the relation of the parts of a building with one another, or of one building with another, but he wanted to speak more of the relation of the building to its natural surroundings—the harmony of the works of man and the works of nature. He supposed they would all admit that such harmony was desirable, but there might be many different opinions as to how it was to be achieved.

We might feel that we could not wait for nature to work the miracle—that blending of earth and building, and we might feel inclined to take a leaf out of the book of William Beckford, the romantic dilettante of the late eighteenth and early nineteenth centuries, who in his potted autobiography—a model of what such things should be—declared that he loved "composing airs, building towers, forming gardens, collecting old Japan, and writing a journey to China, or the Moon." Beckford, when he wanted a house built, gave instructions to his architect "to prepare a design for an ornamental building that should have the appearance of a convent, be partly in ruins, yet contain some weatherproof apartments which would afford shelter from sun or rain." Beckford was, of course, aiming primarily at the appearance of antiquity, and the methods which he adopted were to build in an outworn style and in a manner suggesting that the building was really old. But in doing so he doubtless believed that he was achieving harmony between artifice and nature. Time was the healer of the breach between the two, and time was to be manufactured for the purpose. He was a product of the days when every nobleman built a Gothic ruin in his park, and when men planted dead trees in Kensington Gardens to enhance the appearance of antiquity. To achieve the sense of harmony, the works of man were to take on them as far as possible the garments of nature.

"The Romantic Fallacy."

Mr. Geoffrey Scott, in denouncing the Romantic Fallacy, pointed out that the Romanticists demanded that architecture should "disguise, or in some way render palatable, the original sin of its existence; the fact that it was an artificial thing, a work of man, made with hands." The old architecture never attempted such a disguise; it was not in this way that it acquired a sense of harmony with its surroundings. Nor was it entirely the hand of time which wrought this charm.

It might be argued that our whole civilisation of old was so closely wedded to the soil that a harmony between man's work and the works of nature was inevitable. We must, he thought, recognise that our present state of civilisation was something different from what had gone before, something not so directly based upon nature, something whose essence was conscious and orderly planning. That such a civilisation was necessarily discordant with nature was surely not a tenable proposition.

Industrialism and Art.

At the present day, though we probably thought that we had outgrown the idea that harmony could be achieved by the methods of the Romantic Revival, we had not got much beyond the recognition, shared by the Romantics, that such things as the windmill upon the plain, the cottage nestling at the edge of the wood, and the church tower rising among the trees might be helpful in emphasising the humanised nature of the English landscape. We had accepted the works of industrialism, if we could be said to have accepted them at all, as necessary evils, but had not attempted to take them into partnership, to fuse them into a harmony with nature, to make the lion lie down with the lamb. We feared the spread of industrialism, and the spoliation which we thought must ensue. And yet, when we came to analyse those symbols of modern industrialism, should we treat them as outcasts and pariahs? Because so many of the accompaniments of industrialism were grim and sordid, were we to believe that all industrialism must be so? Were we to believe that all industrialism must be in conflict rather than in harmony with the landscape? Was it not often merely the association of ideas which compelled us to this belief? Our eye was charmed by the sight of a spire pointing to heaven, forming as it were a mark of punctuation in the rolling countryside; but if that spire had its point blunted and a puff of smoke coming out of the top, we held up our hands in horror at the desecration.

Or again, a railway-line cutting its deep furrow across the countryside was considered a matter for regret, whereas we exclaimed in admiration at the sight of a Roman road flung straight across the face of the land, regardless of marsh, hill, and forest. We condemned the one as inimical to the landscape, and praised the other as enhancing the beauty of the view, though there was probably little to choose æsthetically between the two. But we associated the railway with the ugliness which Victorian building brought in its trail—with station streets and sordid hoardings—while our minds linked the Roman roads with the romance of ancient days, with the tramping legions and the rumbling chariots. It was one of the major calamities of our history that the age of railroad building was the age when architecture was at its lowest ebb.

Pylons and Natural Beauty.

Or think of those Roman equivalents of modern industrialism—the fourteen great aqueducts striding across the Campagna and pouring their daily quota of three hundred million gallons of drinking water into the heart of the city of Rome. We thought of them as an adornment to the plain, but the electric pylons, distributing comfort and well-being into the villages of England, were considered as scars on the fair face of the country. He was not going to pretend that the pylons were as beautiful as the aqueducts, nor that a thing should be regarded as beautiful simply because it was useful; that theory had been sufficiently exploded, one hoped. But we should surely try carefully to analyse the æsthetic qualities of a pylon, or a petrol pump, or what not, before condemning it from the association of ideas as a thing inimical to its surroundings. And suppose that after an unbiased judgment we did so condemn the pylon, what were we going to do about it? We could hardly order it off the course altogether, and we were faced with the task of redesigning it to harmonise with the countryside.

How should this be done? Were we going to make the pylon into a fairy-like structure and paint it in green to match the meadows and the hedgerows? He did not think so; not because there was any dishonesty in attempting to hide ugliness, but rather because we should not accept the suggestion that there was anything inherently ugly in the accompaniments of industrialism, but should see to it that those were made into things of beauty, just as were the windmill and the village well in days gone by. One would think that the pylons should be structures representing to the eye in symbolic fashion the tremendous power which they conveyed across the countryside, so that in days to come, when science should have invented some other means of conveying current from point to point, our descendants would look back with awe at the ruined pylons of the twentieth century, as we looked back to-day at the ruined aqueducts of the Golden Age of Rome.

But even our pylons as they stood were not too bad. It was so customary to hear them abused that it was most refreshing to read a letter in *The Times* which took an opposite point of view: "In the dusk," said the writer, "they look like long rows of the ghosts of Euclid's problems, marching over hill and dale till they vanish into the land of the Fourth Dimension." Someone could find poetry even in the pylons. And he had seen the pylons in the Massif Central of France looking most majestic as they strode over the bare hills: while even in Sussex the bold modelling of a down might be emphasised by a row of those much-abused structures.

Architecture an Expression of Civilisation.

Mr. Goodhart Rendel had said that "there is a beauty proper to art, just as there is a beauty proper to nature. It is the duty of a reasoning being to look for each of these in its appropriate place." It was also the duty of the architect to harmonise and inter-relate those forms of beauty. One might say that the essence of man's work was order: the products of nature—the stone, the wood, the brick, the steel—were shaped at his command into a conscious, ordered work of art. To be disordered, quaint, irregular for the sake of being irregular, was for man to deny his birthright. Architecture was an expression of civilisation, and the whole essence of civilisation was the production of order out of chaos. But the orderly mind would not throw a road in a straight line over a steep hill, but would send it serpentining across with generous curves and gentle gradients. Nature was not to be bullied, nor must nature be allowed to bully us. There must be give and take. Nature needed careful handling, and it was perhaps as well to remember that in the long run nature would probably win the victory over the material side of mankind.

And when our work was out of tune, was disorderly, it surely meant that we ourselves were out of harmony with the age in which we lived. So often a lack of harmony in life was apparent, and we refused to see that it was we ourselves who were out of tune with life, who made that discord. As the new age advanced we watched its coming with nervous apprehension. Nothing, we felt, would be quite so good as it was before. But this was surely the wrong attitude. Let us look forward with hope, not dismay. He hoped for a land organised for peace and happiness and prosperity, a land where the ordered beauty and power of the works of man should enhance the beauty of nature; a land of busy townships, not toiling cities; a land where no one was far from the beauties of nature and no one was far from the comforts of civilisation. It was idle to talk of the beauty of industry to-day; but he believed that we could plan with confidence for the future of England, when the hills and the woods, the roads and the rivers, the shops and the homes and the factories should be a fitting and a harmonious setting for the beauty of the labour of man.

Mr. J. F. Walsh (Halifax), proposing a vote of thanks, said he thought that pylons had been far too much abused; they had not marred the countryside nearly so much as telegraph posts.

Colonel H. W. Barker (Bradford), seconded the vote, which was supported by Mr. R. A. Easdale (Castleford) and Mr. C. E. Fox (Halifax), the latter of whom said that the range of pylons running over the hills near Halifax looked, in his opinion, remarkably well.

Mr. B. R. Gribbon said he thought that even railways were not always a blot on the landscape, as witness that through the Vale of Avoca, where the brown stone ballasting of the track formed a delightful ribbon of colour running through the landscape.

SOME NEW PRINCIPLES IN CINEMA DESIGN

By HECTOR O. CORFIATO, S.A.D.G.

The extreme durability of buildings creates a tradition difficult to forsake, and thus it happens that the architect imbued with more classical literary tradition than acute technical knowledge is apt to err on the side of retrogression rather than progression; so much so, that since the earliest known theatre, that of Perugia, which was modelled on the plan of the Greek and Roman theatres (though the latter were built for quite different purposes), the only important innovation dates back as far as 1619, when Aleotti introduced the horseshoe plan. Little change or progress in the development of the shape of auditoriums has since then occurred. The only notable improvement has been the use of the fan-shaped plan, best typified by the Munich Art Theatre, or the partly fan-shaped plan, as in the case of the Little Theatre, St. Louis, U.S.A.

The advent of cinematographic art brought no radical change. It is a curious fact that the majority of designers look always to the past whenever dealing with new problems, where tradition is not only out of place, but may be misleading. Naturally, in the early stages of the newcomer, the usual theatre plan was the obvious inspiration of the cinema designer, thus arresting from the very beginning what could have been a new departure. In plan the governing idea seems to be that of designing a hall to shelter the audience, irrespective of the variation in functional purpose. In a theatre, seats nearest the proscenium are the best; this is not the case for a cinema. In a cinema, first consideration is given to good visibility, and, with the introduction of "talkies," to good audibility. It becomes obvious that in a cinema all seats, whatsoever their cost, must command an unrestricted view of the screen. The fact, too, that the class of patrons is to a great extent different from that of a theatre forces a different solution. No intellectual dilettantism moves the cinemagoer; he is in search of relaxation and amusement under what must be the most comfortable conditions. The modern cinema designer, however, seems to concentrate his efforts on the decoration of the building, seeking such type of novelty which may be thought apropriate to attract the public. True, the film itself ought to prove the decisive factor in the takings of the box-office, but its presentation in an imaginative setting is a factor by no means to be ignored.

Atmospheric decorations invented long ago by Bramante, or lighting effects and futuristic schemes of the extravagant type, have been no serious contribution to rational design. It seems that in a cinema the whole attention of the spectator ought to be concentrated on the screen, and to that effect nothing else in the auditorium should be too conspicuous. To avoid distortion, a certain tilting backwards has to be given to the screen, its angle depending upon the position of the source of the light beam. But this angle must be within certain limits if it is to allow good visibility from the stalls.

Of course, if the screen were to be tilted forwards, as in the case for pictures in an art gallery, the better for the spectators. This is, however, impossible with actual arrangement of cinema floors—a legacy of theatre planning—sloping towards the screen. Some interesting attempts have been made, both in America and France, towards a more rational solution of the problem. If a spectator is sitting in a chair, leaning back and looking upwards, no doubt he is in a more comfortable position than seated according to the present arrangement of seats, whereby much fatigue and strain are caused. This improvement can only be obtained by sloping the floor in the opposite direction, the highest level being near the screen. At the same time the screen is raised in relation to the floor, producing a twofold improvement. There is no need for vertiginous slopes for the balcony and gallery; the level of the projection chamber is lowered, and a corresponding betterment in distortional effects of lesser importance takes place. The angle of visibility from all floors in relation to the screen is nearer to the normal. There is no doubt that here we find a solution approaching the truth. The screen may even be slightly inclined towards the public, but it is to be noted that in both cases, whether the floor slopes away from the screen or towards it, the angle between the balcony and ground-floor lines hardly varies. The practice of providing variety attractions in a cinema seems to complicate the problem of having good visibility, both for the horizontal surface—the stage—and the vertical surface—the screen. It seems, however, that in such cases a higher stage would solve the problem with a slight compromise in the angles of visibility.

These new principles have been applied at the Cinéma Victor Hugo, in Paris. The architects, Messrs. Charavel and Mélendès, were successful not only in obtaining perfect visibility but also in increasing the seating accommodation. The plan itself, as seen on the accompanying sketch, is trapezoidal, following the outlines of sound waves of a loud-speaker, the small side where the screen is to be found being the source of sound. We have here an interesting departure from routine planning which may lead to further developments. Perhaps the coming introduction of stereoscopic films may necessitate a still more radical change in cinema design.

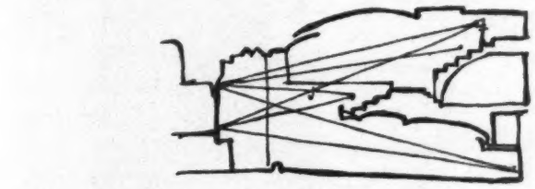
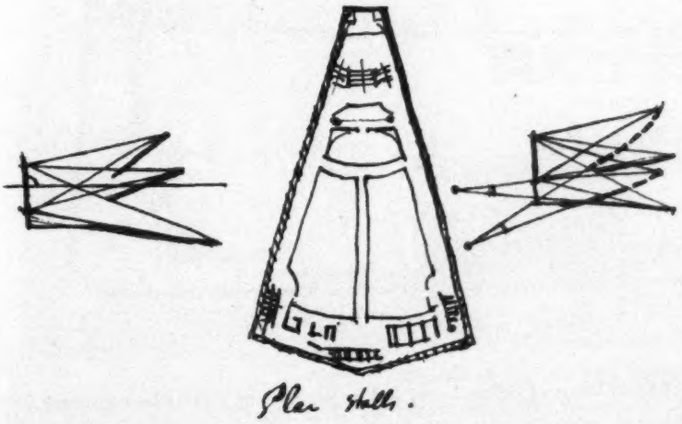


Diagram section cinema Victor Hugo Paris.



Plan stalls.

PICTURE EXHIBITION

At the Fine Art Society in Bond-street Mr. Leonard Squirrell, R.E., R.I., is holding an attractive exhibition of his work. The subjects are varied, and include oils, water-colours, mezzotints, etchings and drawings in monochrome. No. 26, "Barnard Castle, on Tees," in sepia and ink, is a pleasing and restful subject, conveying to the mind the charm that is yet to be seen in the English countryside. No. 11, "Overhanging House, Venice" (oil), shows the quiet dignity of a minor type of old house alongside a waterway. No. 4, "The Rising Moon, Venice," is an impression of the still and peaceful eventide. No. 19, "Ipswich from the South-West," is a bird's-eye view showing the ancient East Anglian town amidst a picturesque and typical Suffolk landscape, and should be acquired by the local gallery. No. 5, "Matlock from Cromford Black Rocks," conveys one to the open and breezy countryside in a convincing manner. No. 65, "Village Shop," is a broadly washed on sunny drawing of an old house and shop. Mr. Squirrell is in sympathy with the old materials of the building, and has portrayed their texture and colour admirably. More ambitious is "Bamborough Castle," No. 55 (oil), the castle making an impressive picture silhouetted against the sky. Many others of the 68 pictures on view are worthy of mention. Sir Reginald Blomfield, R.A., contributes an appreciative foreword to the catalogue.

FACULTY OF SURVEYORS OF SCOTLAND

Annual General Meeting.

The twentieth annual general meeting of this Faculty was held in Glasgow on Wednesday, February 22. The reports of the General Council, the General Examining Board and the Benevolent Fund Trustees, along with the relative accounts, were submitted and approved. Mr. A. M. Ritchie, Edinburgh, was admitted to Fellowship and presented with his diploma.

Mr. J. Edwin Morgan, F.F.S., Edinburgh, was appointed President for the current year, and Mr. Alex. H. Purdie, F.F.S., Glasgow, Vice-President.

Following is the General Council for 1933 :—Messrs. J. Edwin Morgan (President), Alex. H. Purdie (Vice-President), J. Parnie Dansken, C. R. Douglas, J. W. Dunn, Thos. P. Little, Gilbert J. Murray, W. Brown Pringle, David Reid, Andrew D. Scott, Alan C. Smith, Fred. Smith, John H. Underwood, Alex. J. Wilson.

ILLUSTRATIONS

PLATES

Church of St. Martin, Dagenham.

This church was consecrated last year by the Bishop of Chelmsford. It accommodates 450 people, and is built entirely of brick, as the strictest economy had to be exercised. In order to get the greatest effect of height and space for the smallest expenditure, the nave, chancel and aisles have been made comparatively narrow, the walls kept as high as possible, and the roof constructed with curved principals. The mode of architectural expression is founded on English Gothic adapted to modern requirements. The mullions and tracery windows are entirely constructed of moulded brick, reinforced with bronze saddle bars, some of which pass through the mullions from wall to wall. These windows, and the whole of the external facing, are built of hand-made multi-coloured Essex bricks. The roofs are covered with thick, hand-made plain tiles, the bell turret is of oak, and the covering of copper. Internally, the piers, arches and walls are faced with cream-coloured sand-lime bricks. The roofs are of Columbian pine, as is the vestry joinery, but in the church all the doors are of English oak. Warming is effected by the "Comfort" system of hot-water central heating. Efficient natural ventilation is provided by iron casements in the windows, and by openings in the gables. The church is lighted by shaded electric lamps concealed in the roofs.

The altars, riddel posts, communion kneeling benches and standard lights are of simple design in English oak. The altar crosses and candlesticks are of oak and pewter, and the alms dish and font ewer are of pewter. The font is of sand-lime bricks and Portland stone. The pulpit is of English oak, with linen-fold panels and traceried upper part. With the exception of the choir stalls and lectern, which came from the temporary church, the whole of the fittings, the altar hangings and the frontals have been made from the architects' designs.

The total cost of the church, including heating, lighting, fittings, chairs, paths, fencing and fees, but not including the memorial pulpit, nor the organ, was £8,846 5s. 6d., equal to £19 13s. 2d. per person.

The builders were Messrs. Hammond and Miles, Ltd., Ilford, who also made the oak fittings; and the following firms were also associated with the work:—Mumford, Bailey and Preston, Ltd., heating; G. W. Franklin and Son, electric lighting; James Brown, 1919 (Brentwood), Ltd., external facing and moulded bricks; Grovebury Brick Works Co., internal facing bricks; Liverpool Artificial Stone Co., Ltd., artificial stone paving in chancel, etc.; The Granwood Flooring Co., Ltd., gangways in nave and aisles; R. E. Pearse and Co., Ltd., lead glazing and casements; West and Collier, Ltd., Hambleden, Henley-on-Thames, chairs; Brown and Englefield, pewterwork; Wiggins-Sankey, roof tiling; F. Braby and Co., Ltd., copper covering to turret.

Messrs. J. E. Newberry and C. W. Fowler, F. & A.R.I.B.A., were the architects.

Penge Congregational Church: Chapel of Youth.

It is proposed to convert the south transept of this church into a chapel for the special use of the "Scouts" and "Guides" attached to the church. The screen will be pagan in character outside, and carry, in gold, Imperial crowns and laurel leaves, and over the entrance the word "Honor." Immediately opposite the entrance, on the wall, will be inscribed the word "Virtus," and over the exit, "Humilitas."

The "Humilitas" side of the screen will be Christian in character, and carry thorns and celestial crowns. The intention of the symbolism is that youth should be encouraged to seek "Honour"; in pursuit of it he will have attained "Virtue"; and, in the end, if the Good Lord wills it, the grace of "Humility" may be given.

An attempt to give dignity to the Communion Table is made by the use of a canopy of green and red brocade, but the Protestant position is emphasised by the use of the words "In Remembrance of Me," rather than "Hoc est Corpus."

It is hoped that the Committee may be induced to commission a student at the R.A. or other schools to paint some frescoes, rather than purchase the usual "old master" or popular pictorial reproductions. The work is being carried out by Messrs. George Green, Ltd., of Beckenham.

Mr. Herbert Ibberson, F.R.I.B.A., is the architect.

"Winstone House," Clerkenwell.

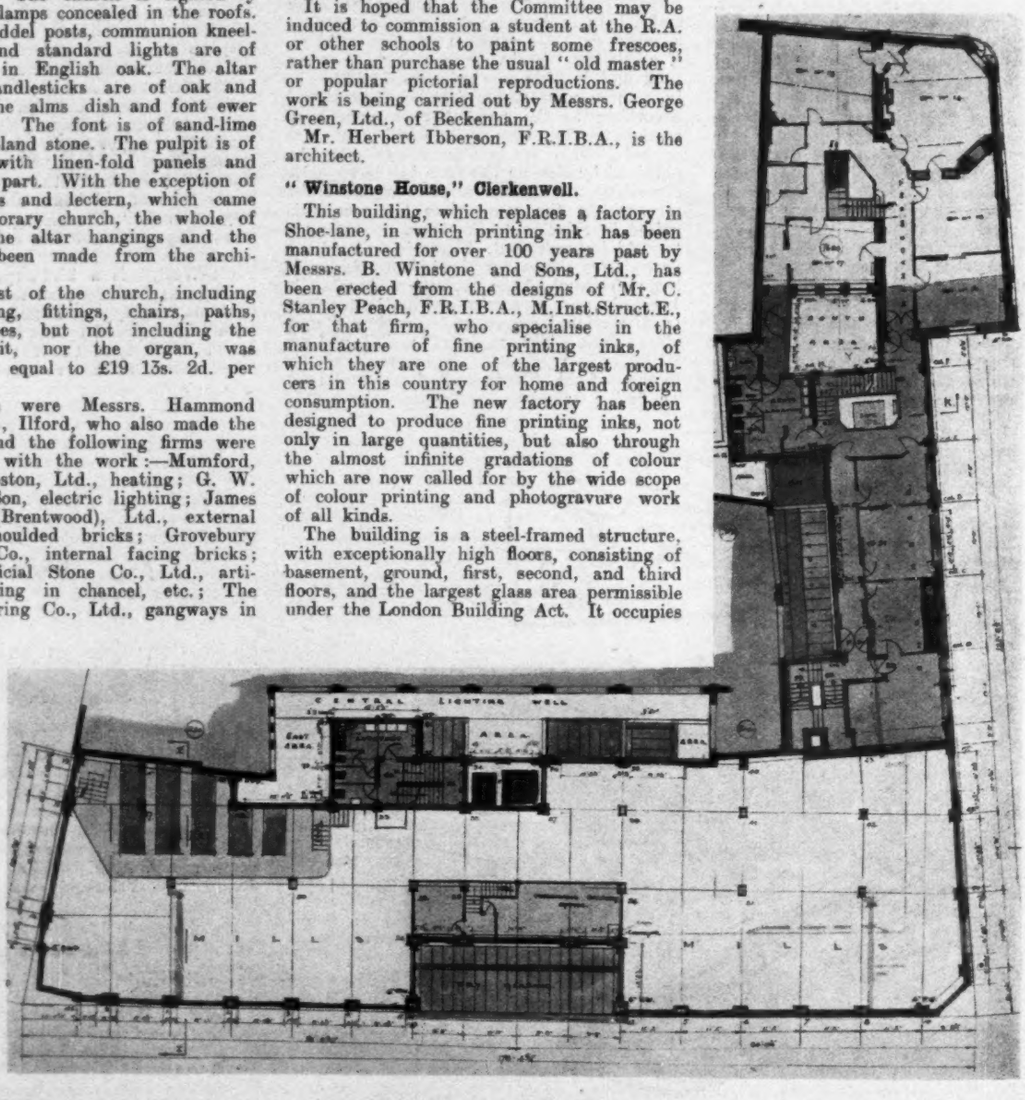
This building, which replaces a factory in Shoe-lane, in which printing ink has been manufactured for over 100 years past by Messrs. B. Winstone and Sons, Ltd., has been erected from the designs of Mr. C. Stanley Peach, F.R.I.B.A., M.Inst.Struct.E., for that firm, who specialise in the manufacture of fine printing inks, of which they are one of the largest producers in this country for home and foreign consumption. The new factory has been designed to produce fine printing inks, not only in large quantities, but also through the almost infinite gradations of colour which are now called for by the wide scope of colour printing and photogravure work of all kinds.

The building is a steel-framed structure, with exceptionally high floors, consisting of basement, ground, first, second, and third floors, and the largest glass area permissible under the London Building Act. It occupies an exceptional site, having three clear fronts, with a fairly clear front to Clerkenwell-road, altogether totalling some 430 ft., with large open areas at the rear with light from the four cardinal points, so that colour can be studied and matched under almost any conditions of light.

The management offices are located in an old building on the Clerkenwell-road, altered to suit the requirements of the new occupiers. The engineers' offices and the factory are situated in Eyre-street Hill and Summers-street and Back-hill, there being a difference of nearly 20 ft. in level between the south-west and north-east corners of the site.

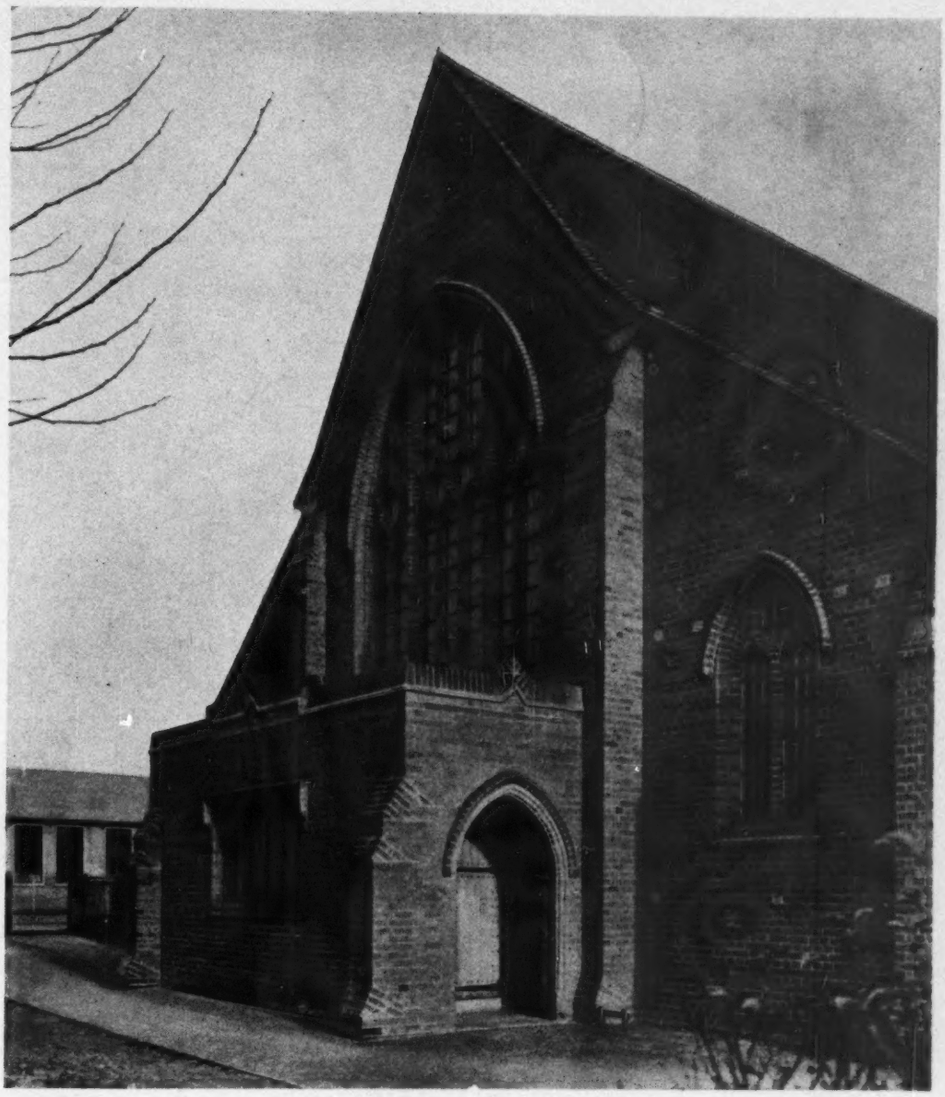
The foundations are a reinforced concrete tank, carried out by Messrs. Peter Lind and Co., Ltd., of Westminster, and the steel frame is by Messrs. A. D. Dawnay and Sons, Ltd., of Battersea. After erection of the steel frame, reinforced concrete foundations and floors, the building was completed by Messrs. F. Troy and Co., Ltd., of Finchley-road, N.W., general contractors, with specialists' work as follows:—Mellowes and Co., Ltd., roof glazing; Humphries, Jackson and Ambler, Ltd., metal windows; Haywards, Ltd., stallboard and pavement lights, iron staircases and glazed and metal enclosure of passenger lift; Marryat and Scott, Ltd., lifts; Mather and Platt, Ltd., sprinkler and drencher installation and fire-resisting

(*Continued on page* 384.)

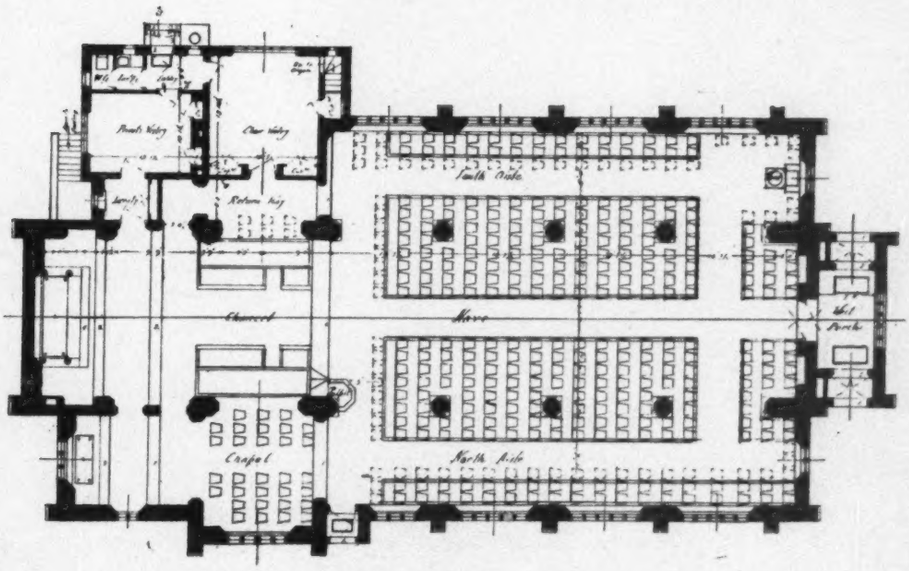


"Winstone House," Clerkenwell, E.C.: Plan of First Floor of Office Level and upper part of First-Floor Factory Level.

MR. C. STANLEY PEACH, F.R.I.B.A., Architect.



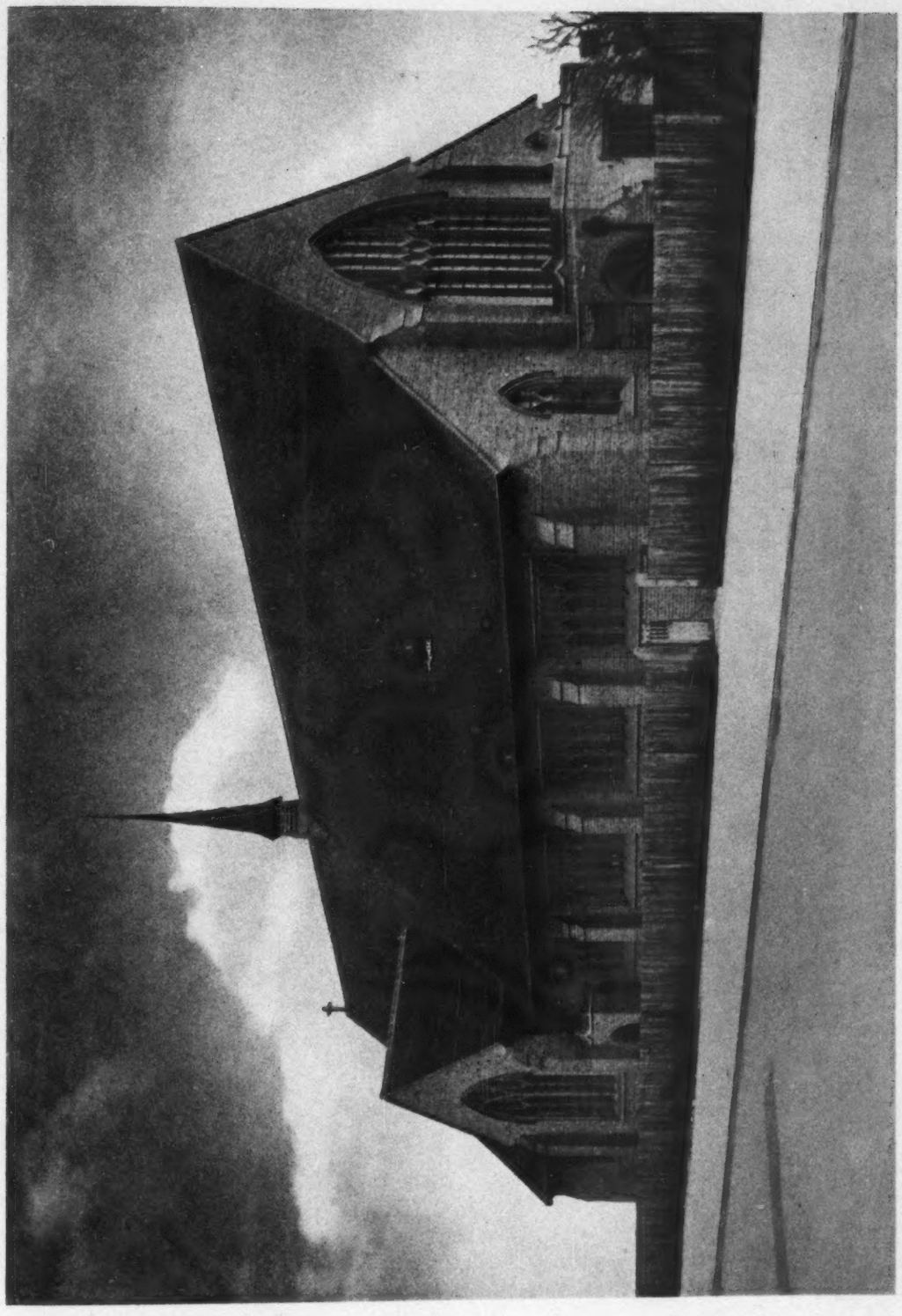
DETAIL OF WEST END, SHOWING ENTRANCE PORCH.



PLAN.

Church of St. Martin, Dagenham.

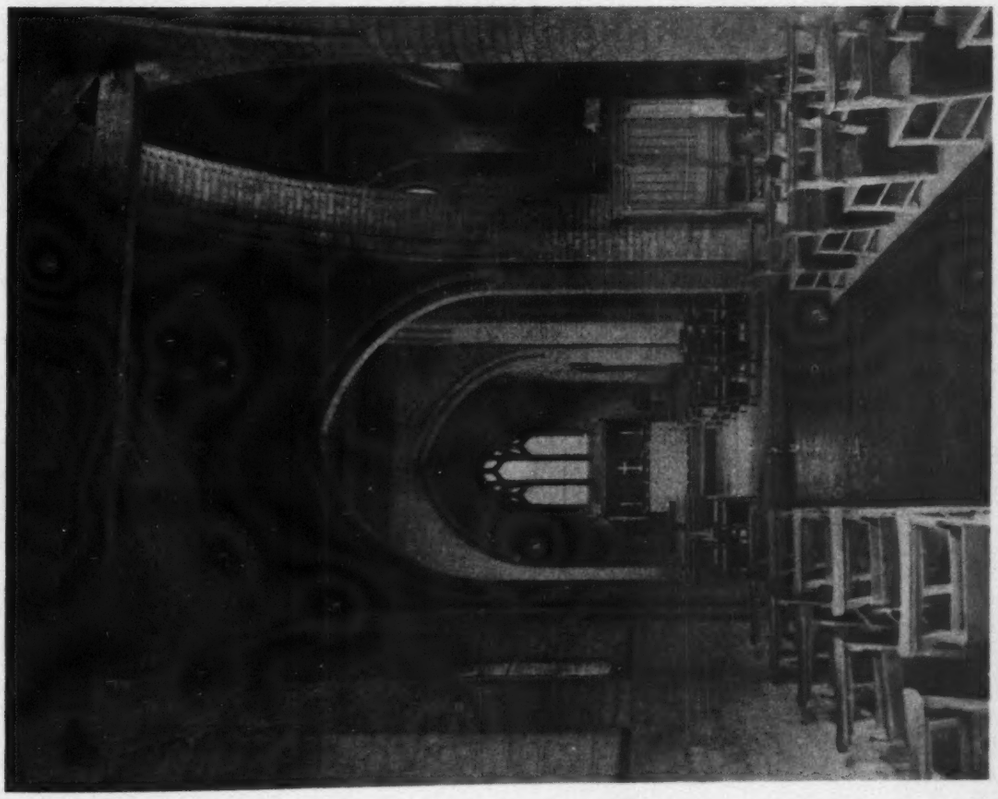
MESSRS. J. E. NEWBERRY AND C. W. FOWLER, F. AND A.R.I.B.A., Architects.



Church of St. Martin, Dagenham: View from North-west.

MESSRS. J. E. NEWBERRY AND C. W. FOWLER, F. AND A.R.I.B.A.s, Architects.

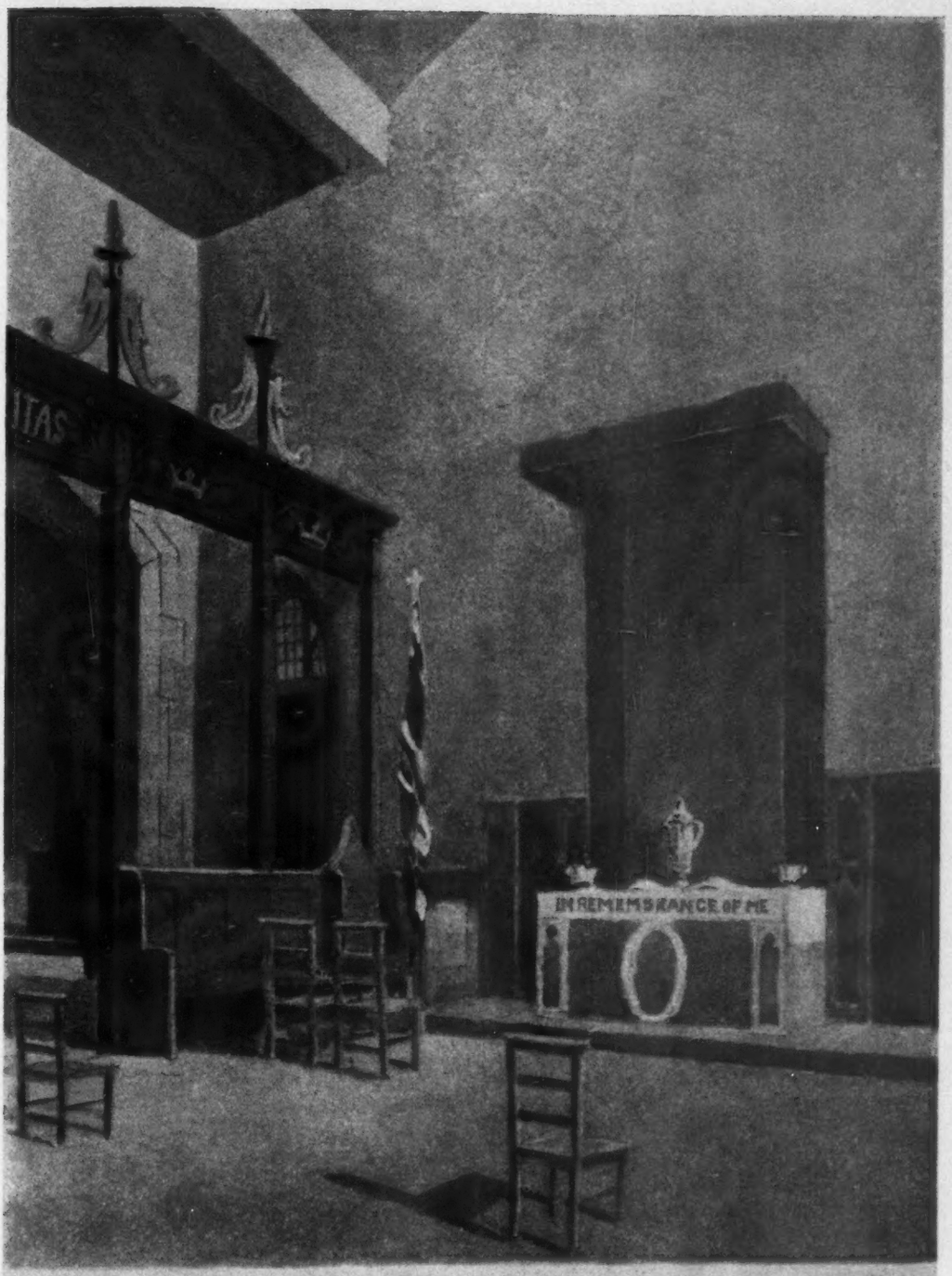
THE NAVE, LOOKING EAST.



THE NORTH AISLE, LOOKING EAST.

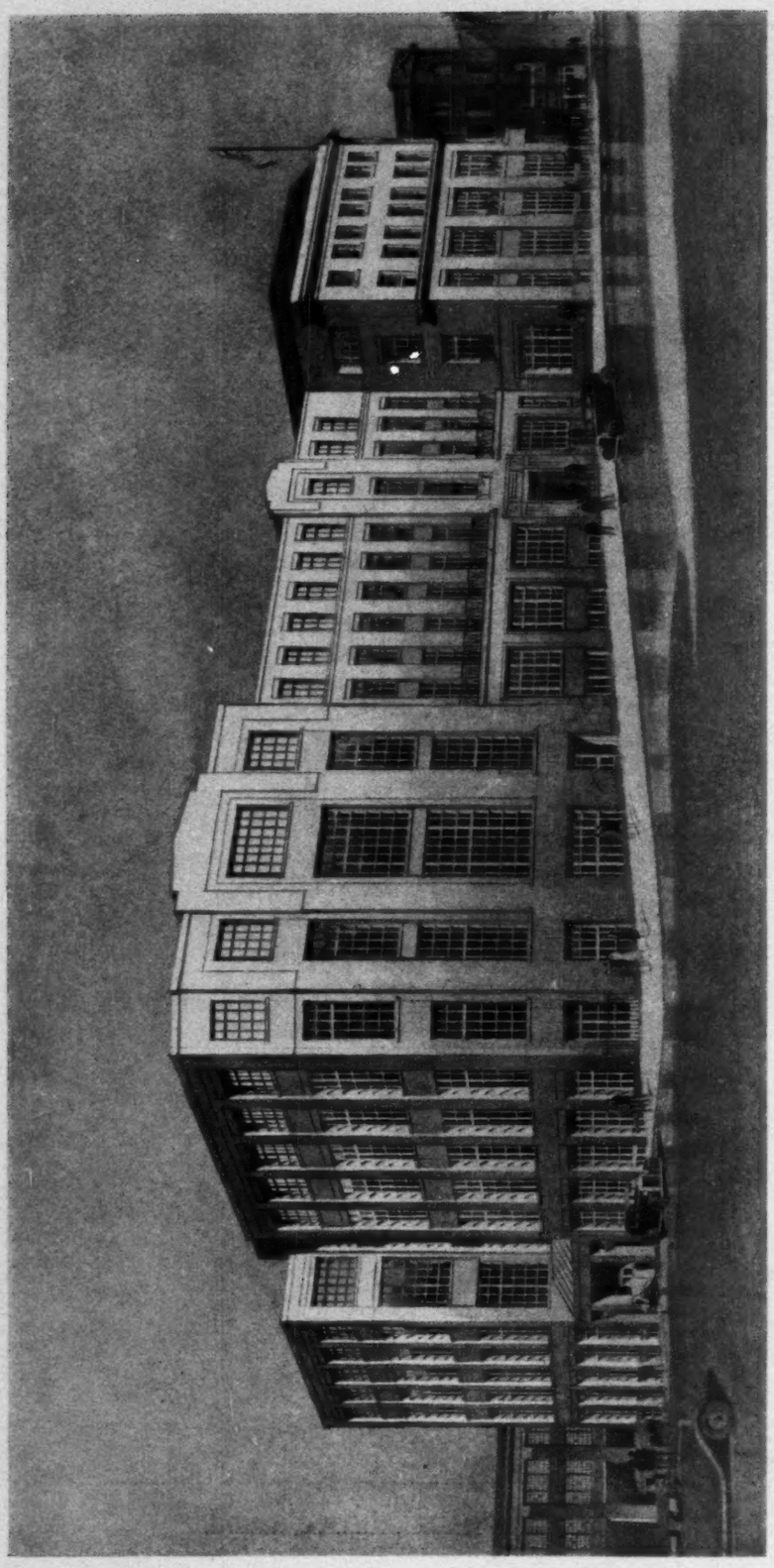
Church of St. Martin, Dagenham.

MESSRS. J. E. NEWBERRY AND C. W. FOWLER, F. AND A.R.I.B.A., Architects.

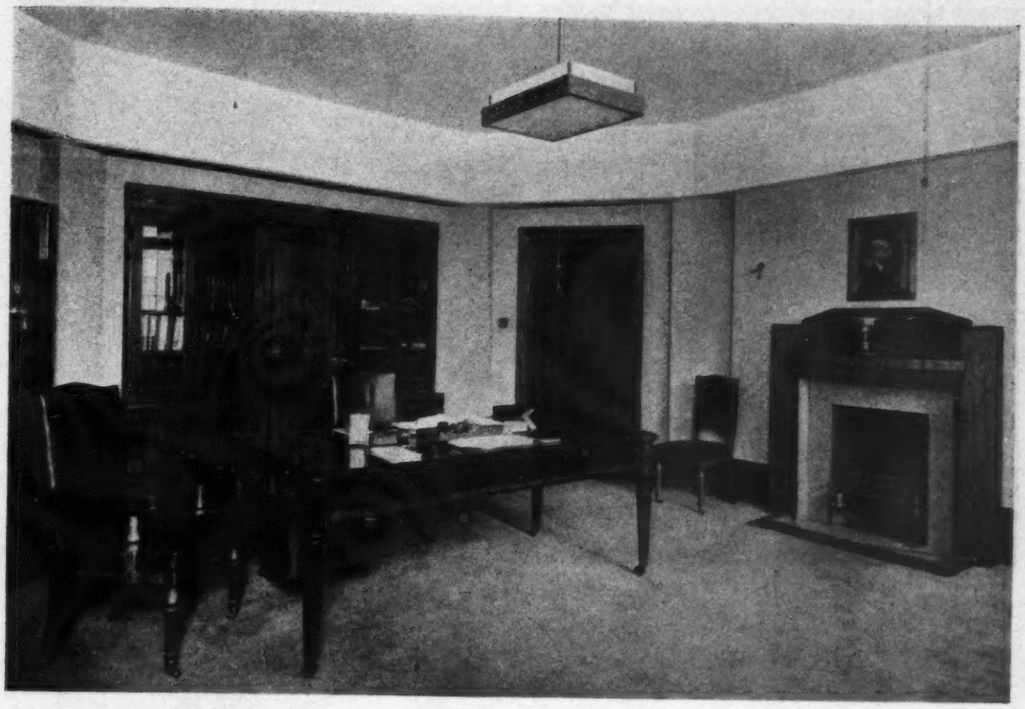


A SUGGESTION FOR CONVERTING THE SOUTH TRANSEPT OF THE CONGREGATIONAL CHURCH AT PENGE INTO A CHAPEL OF YOUTH.

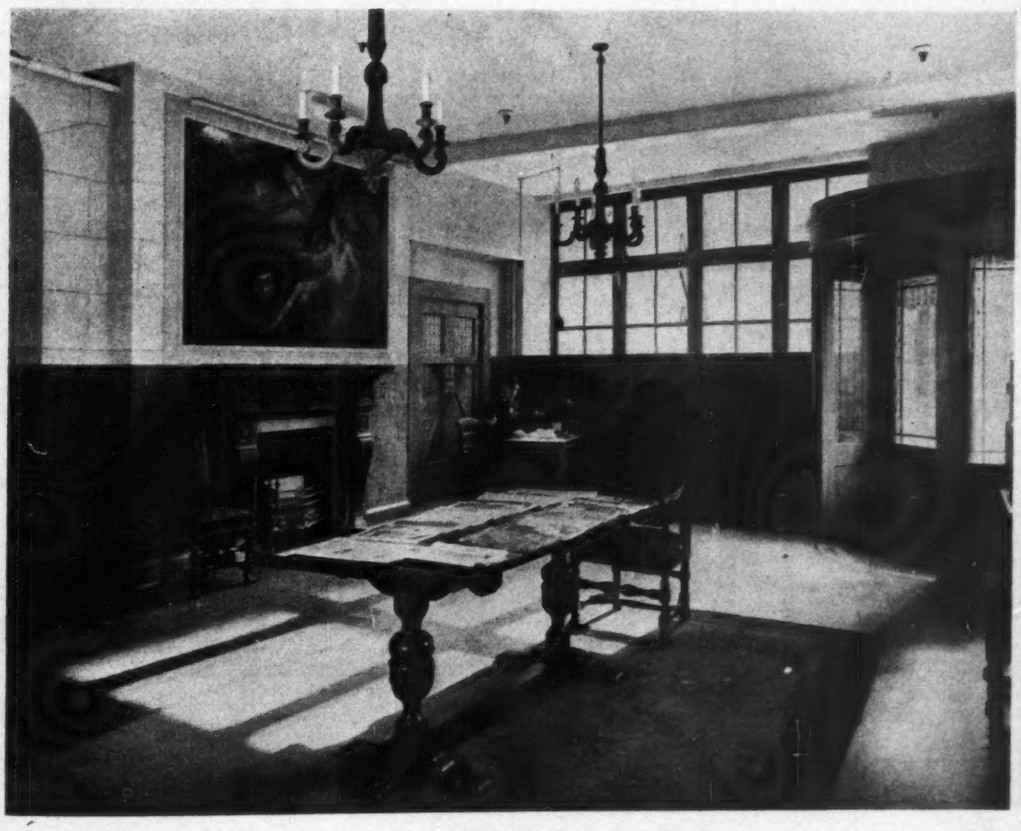
Mr. Herbert Ibberson, F.R.I.B.A., Architect.



"Winstone House," Clerkenwell, E.C.
Mr. C. Stanley Peach, F.R.I.B.A., Architect.



MANAGING DIRECTOR'S OFFICE.

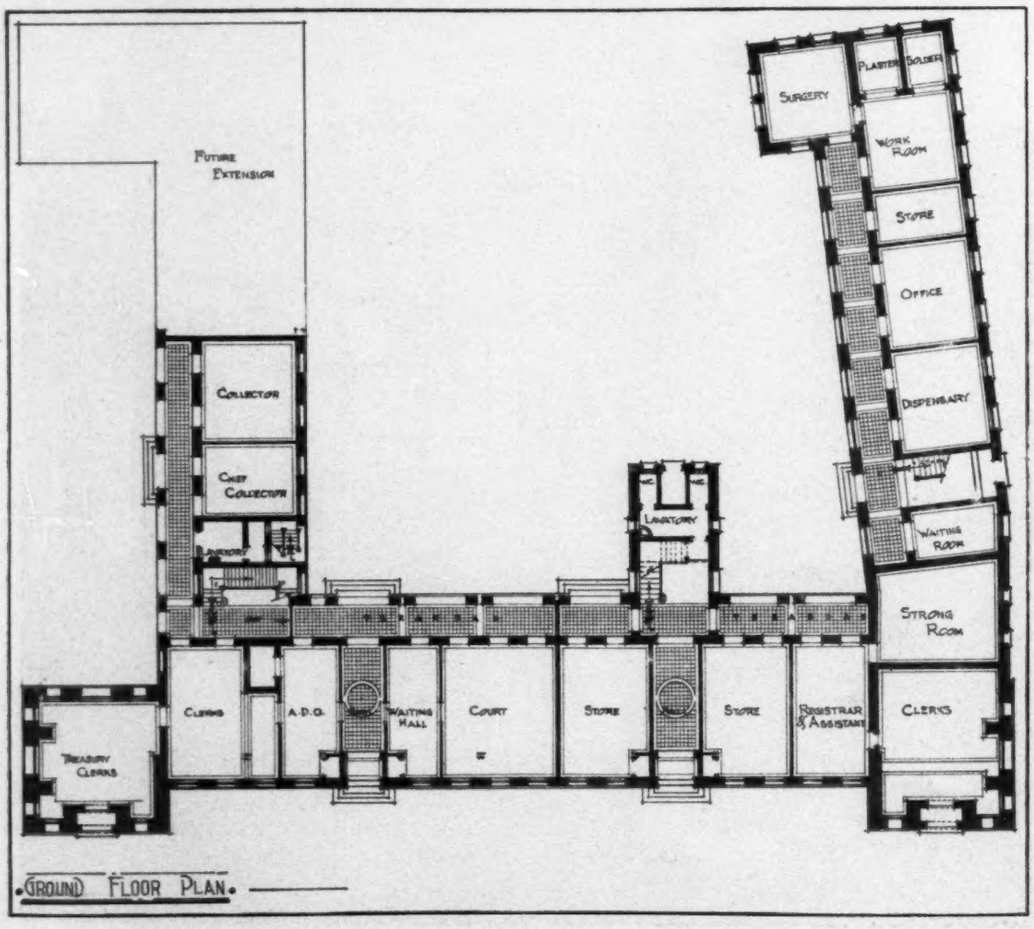


ENTRANCE HALL.

"Winstone House," Clerkenwell, E.C.

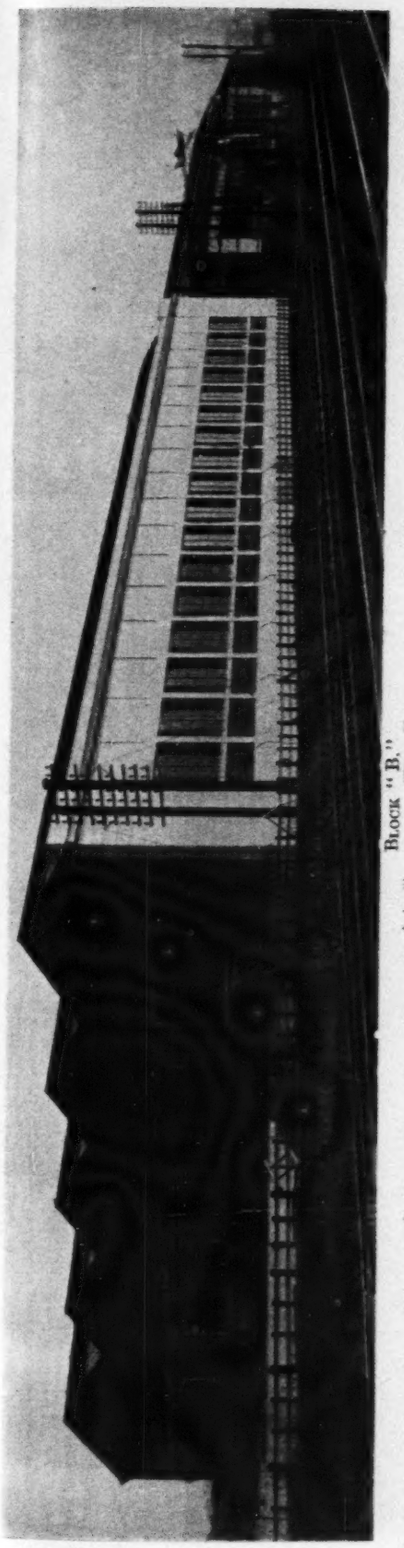
MR. C. STANLEY PEACH, F.R.I.B.A., Architect.

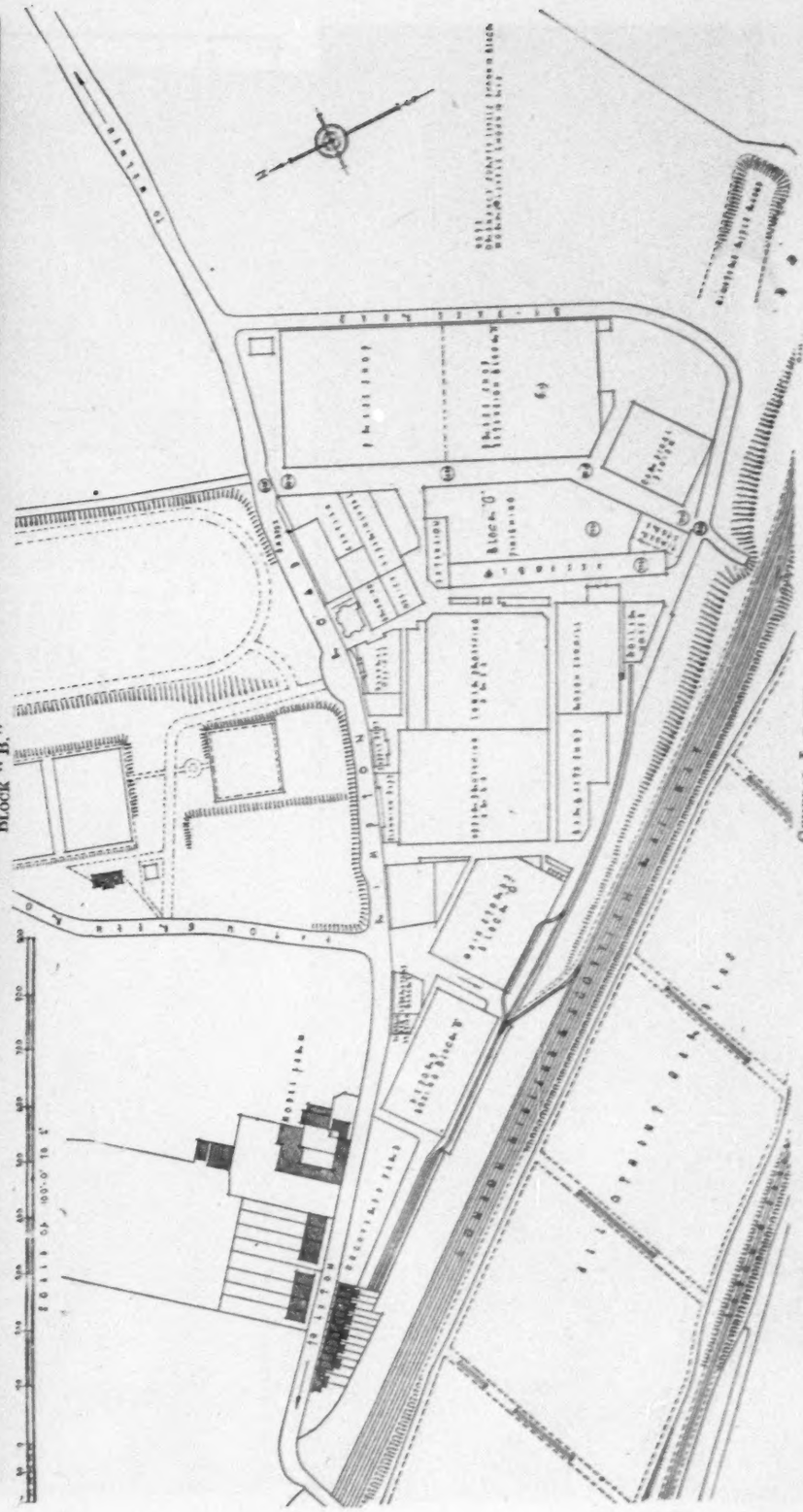
PRINCIPAL FRONTAGE.



New Public Offices, Lagos, Nigeria, West Africa.

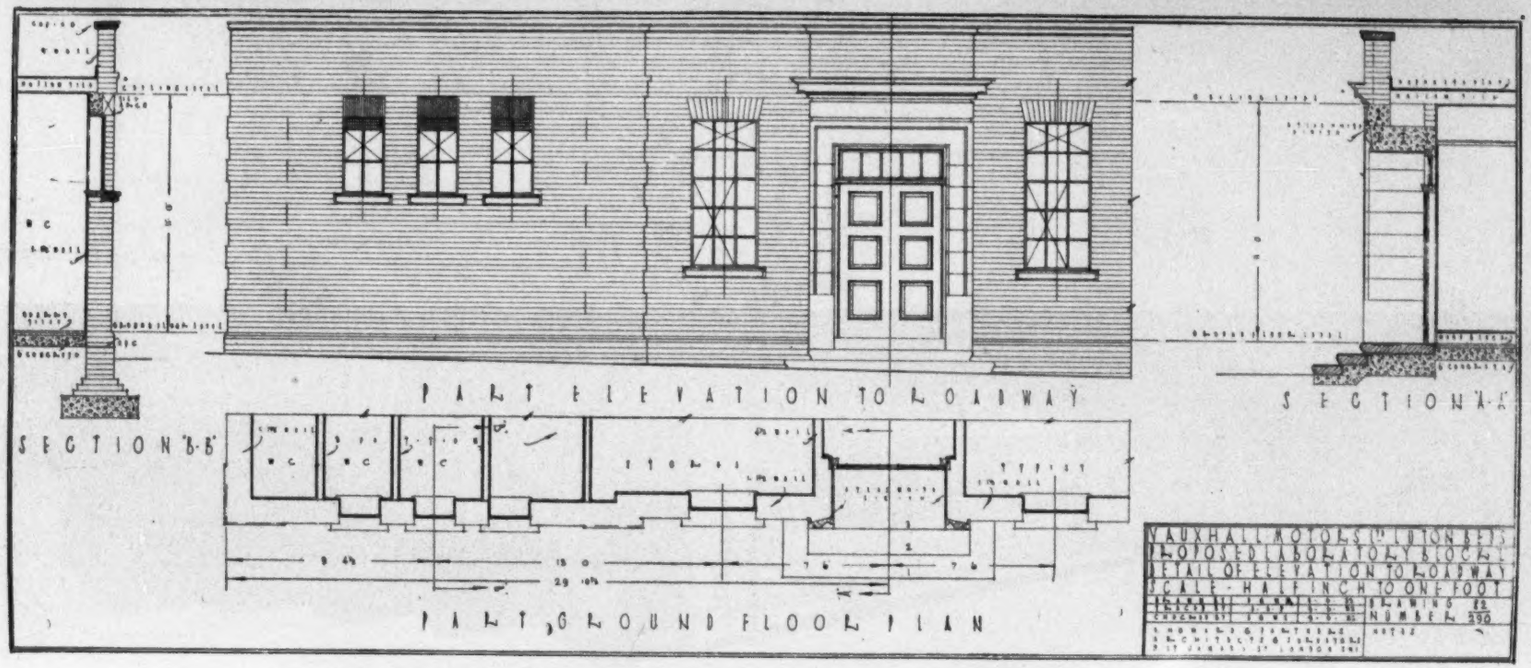
MR. HENRY A. PORTER, F.R.I.B.A., Senior Architect, Public Works Department, Lagos.



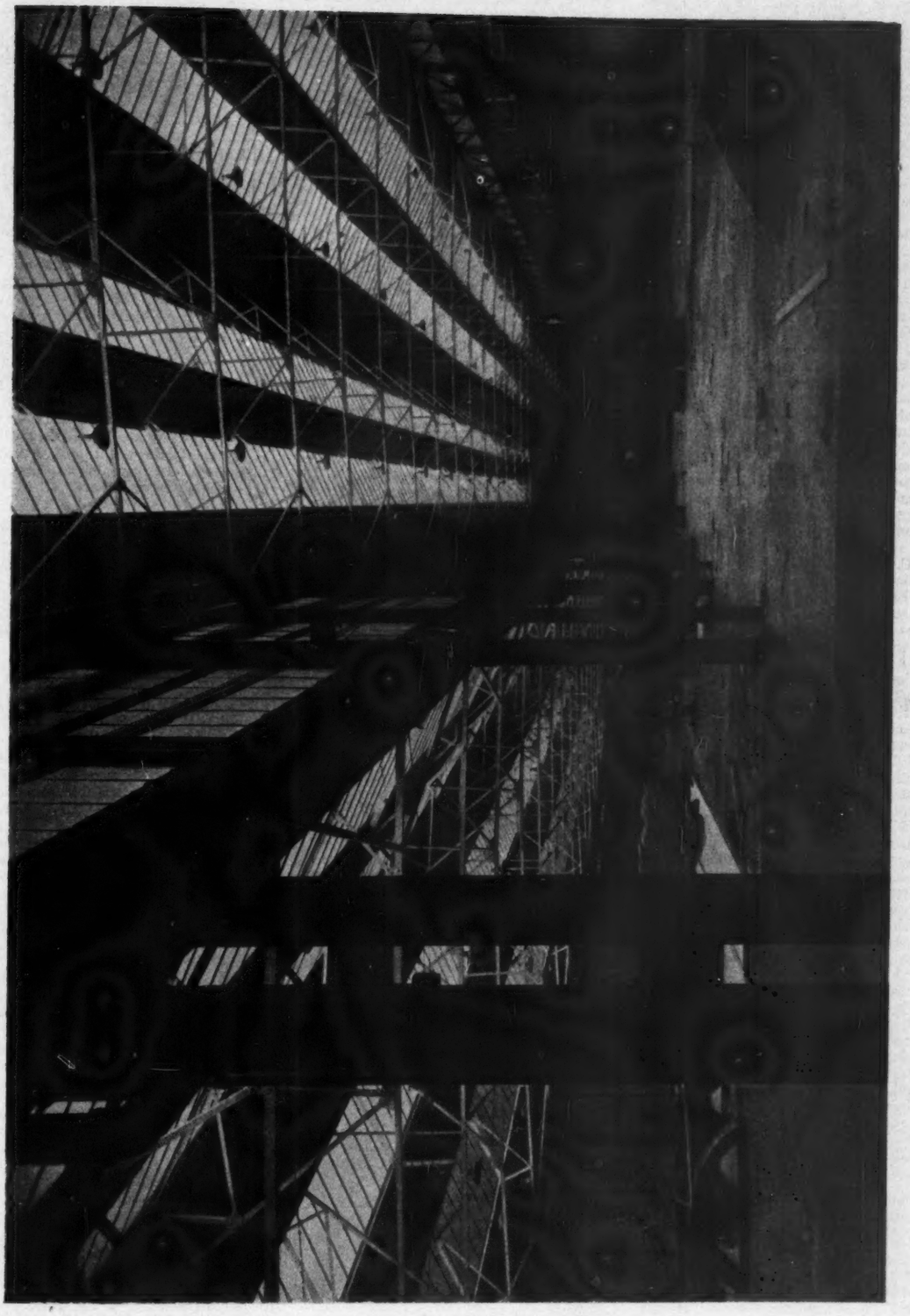


GENERAL LAY-OUT.

Vauxhall Motor Works, Luton. MESSRS. E. HOWARD AND PARTNERS, Architects.



Vauxhall Motor Works, Luton: Laboratory Block. MESSRS. E. HOWARD AND PARTNERS, Architects.



Vauxhall Motor Works, Luton : Press Shop Extension.
MESSRS. E. HOWARD AND PARTNERS, Architects.

PROPOSED NEW PUBLIC WORKS

It is a happy sign that expressions of confidence in the power of the Building Industry to play an increased part in the alleviation of unemployment and the eventual return of prosperity are on the increase. The Industry itself has never doubted that, given an opportunity, it can absorb labour and create permanent values through the carrying out of necessary profit-earning or money-saving public works. We have quoted in this column opinions of various experts. The latest is that of Sir Geo. M. Gillett who, in *The Times* for February 24, states: "Local authorities are repaying debt at the rate of £25,000,000 a year. They should be encouraged to use these funds in the development of fresh schemes. . . . The provision of suitable buildings for health and educational work on the completion of unfinished road schemes are all worthy of consideration. . . . To-day, with credit not only cheap but plentiful, and actually sterilised by non-use . . . this policy is recommended not merely as a means of employing a few thousand men, but for the purpose of increasing the circulation of money." Much the same opinion is expressed by Mr. Reginald McKenna, chairman of the Midland Bank, who, speaking to representatives of the engineering and allied industries at the British Industries Fair at Birmingham, said: "A fillip from the higher authorities, however, would be welcome. The time is ripe for the encouragement of expenditure on sound enterprises and the abandonment of all restrictions on new issues."

It cannot be too strongly emphasised that works planned merely to afford occupation should be outside the scope of consideration. As Mr. C. J. Kavanagh, Director of the British Steelwork Association, stated in *The Times* on February 23:—"The problem of the day is to decide what measures of wise recuperative spending can safely be recommended during a slump of the present magnitude. The disadvantages of canalising activity along lines which do not lead to an increase of fluid wealth are recognised, but between that class of pure relief work and the class of activity which springs from normal private enterprise there is a wide field of valuable work carried out by public authorities which is comparable in many respects with the work of public utility companies. Work of this kind, such as bridge-building, dock and harbour work and equipment, and the building of rolling stock, provides employment at a commercial cost approximating to £200 a man per annum in present circumstances, in contrast to the unattractive cost of relief work programmes which, with heavy charges for land purchase, etc., are stated to cost about £500 a man per annum. Moreover, such work provides employment for expensive plant and machinery as well as for the operatives, and enables idle capital as well as idle hands to earn a little, thus assisting to alleviate the terrific wastage on capital invested in industrial plant to-day which, together with unemployment, demands a bold line of action to rehabilitate confidence." Meanwhile, we give below details of new schemes proposed by public authorities. News of further plans will be found under "Current and Proposed Building Work."

Acton.

The Council have revived a municipal offices extension scheme, and have included £50,000 in the estimates for that purpose.

Brighton.

The Education Committee's proposal to erect a junior mixed and infants' school for 432 scholars at the Whitehawk estate has been approved. The Ministry of Health has sanctioned the erection of 280 houses in the same district.

Dublin.

Dublin is undertaking a big scheme of slum demolition and rebuilding, to cost nearly £2,000,000. The Housing Committee of the Corporation is now concentrating on a slum area of 40 acres on the north side of the city, and large numbers of well-built and attractive houses are springing up. Already 1,100 are practically completed and 1,119 more are in course of construction. The scheme provides for the housing of about 6,500 families. In spite of the magnitude of Dublin's municipal debt—£5,200,000—the Corporation is determined that the slums shall go. The Housing Committee has appealed for public support and describes the scheme as a sound proposition for investors.

Edinburgh.

It is stated that the Government is considering the commencement of the erection of new Government buildings, where the various Departments are at present housed in 22 different buildings.

Ilford.

Essex C.C. proposes the erection of a County High School for Boys at Ilford, to plans by the county architect. Tenders, returnable by March 23, are now invited.

Leyton.

Applications for leave to tender for the erection of shops, public library and offices at the corner of Church-lane and High-road, Leytonstone, E.11, are being invited, by March 13, by the Borough of Leyton. Plans have been prepared by Mr. J. Ambrose Dartnall, 11, Dowgate-hill, E.C.4.

London.

Certain Ministers are considering the possibility of reviving the scheme for rebuilding part of Whitehall. This would involve the demolition of Montagu House, the headquarters of the Cabinet Secretariat and the Ministry of Transport. The cost has been estimated at £2,000,000.

Maidstone.

New County buildings, to cost £50,000, are proposed by the Kent County Council on the prison site.

Manchester.

A new police station—planned by Mr. G. Noel Hill, City Architect—is to be erected in South-street, Albert-square. It is estimated to cost £110,000.

Norwich.

Norwich City Council has accepted the tender of Messrs. W. J. Simms, Sons, and Cook, Ltd., of Nottingham, of £33,372, for the erection of a new fire station and police section house. Mr. S. G. Livock, F.R.I.B.A., 21, Bedford-square, W.C.1, is architect.

Prestwick.

The Town Council proposes to erect burgh chambers, municipal offices and public baths on a site in the burgh, and are to hold an architectural competition to select an architect. Details will be found on page 364.

Solihull.

Mr. A. C. Bunch, County Architect, has prepared plans for the erection of Petty Sessional Courts at Solihull, for Warwick County Council. Applications to tender are now being asked for, last day for applications being March 10.

Surbiton.

The U.D.C. is asking for tenders for the construction of an open-air swimming-bath. Applications for particulars must be made not later than March 8.

Swansea.

The Swansea Corporation is to erect additional buildings at the High School for Girls, Swansea, to plans by the Borough Architect. Tenders are now being asked for, to be returned by March 8.

Watford.

The Herts C.C. is to erect a County Council School, to accommodate 960 scholars, at Leggatts-way, Watford North. Plans have been prepared by Mr. Sydney Dawe, A.R.I.B.A., 83, High-street, Watford. Applications for quantities are invited by March 7 at latest.

THE GOVERNMENT HOUSING POLICY

SPEECH BY THE MINISTER OF HEALTH.

In a speech on February 23 to the Burnley Building Society at Burnley, the Minister of Health dealt with the housing policy of the Government.

The housing policy of the Government, he said, was directed towards the prompt and efficient supply of the recognised needs of the nation. The chief were: more small houses to let for the wage-earners with lower rates of wages, and prevention and cure of the evil of slums. For the last 14 years, successive Governments had sought to meet those needs by means of subsidies. They had provided general subsidies in varying forms for building houses for the working classes; and since 1930 special subsidies for slum clearance had been provided in addition. That policy had had its successes and its failures. It had helped to create many fine municipal housing estates. It had failed on the whole to meet either of our two chief needs. It had not given the nation an adequate supply of small houses to let. It had not resulted in any adequate attack on the slum evil. It had been hoped that the growth of municipal housing estates would result in a "filtering up" of the slum-dwellers and the abolition of slums. On the whole that hope had been falsified. The new houses had not in general been occupied by the slum-dwellers, and the slums remained.

Confronted with the failure of the policy of general subsidies to meet our chief needs, we must not rest content with that policy. We must seek out the causes of the failure, and when we had found them, put them right. What were the causes of the failure? All experience pointed to their being inherent in the system of general subsidies itself. Such subsidies tended to keep up costs. They confronted the normal sources of supply, in the building trade and the public investment market, with competition that the latter could not face. Thus they drove private capital and enterprise away from building to other objects, and deterred the very supply that they were intended to promote. Again, under some conditions, general subsidies tended to deter the extinction of slums. General subsidies attracted the energy and resources of housing authorities away from slum-clearance to the construction of fine new housing estates. It was natural that it should be so. It was easier to provide new houses at large than to carry out the difficult negotiations, and possibly conflicts, with private interests, involved in slum-clearance.

Such, said the Minister, were the chief reasons why the policy of general subsidies had failed to meet our needs. As long as the relation between rents and building costs made the supply of small houses we needed impossible on a commercial footing without substantial loss, the policy of general subsidies was, no doubt, a necessary second best. It did provide houses that were useful, although not in general houses of the type that we most needed. It was better than nothing. But we must be on the alert to get rid of its disadvantages at the earliest opportunity. Now an opportunity had come. It was provided by the recent fall in building costs and interest on capital. By taking advantage of that new situation to get rid of the general housing subsidy, we cleared from our path some of the chief obstacles which had stood in the way of more houses and fewer slums. We enabled builders and investors to throw their energy and resources into meeting our needs, by freeing them from the prohibitive competition of subsidised building in general. We set to work the forces of competition, with their attendant improvements in technique, that commonly had the effect of reducing costs of production. As to the slums, we could concentrate the

energies and resources of housing authorities on the direct work of getting rid of them. We made it better worth their while to deal with their slums, since it would be by that alone that they would be able to get the benefit of Exchequer subsidies to improve their local housing conditions. The Government would make use of the whole power and influence of the central administration to promote the two chief ends of which he had spoken: that was, to encourage the building trade to build the houses that we wanted, and investors to invest in them, and to encourage housing authorities to deal promptly and radically with their slums. The Government would make a massed attack on the slums. Local authorities must wake up about them. Theirs was the first responsibility. We must have the whole force of public opinion to support the advance. The Government would back it up to the utmost. They set no limit to the pace of the work; the faster the better. He had been criticised for saying that no more than 12,000 houses a year were to be dealt with: he had never said anything of the sort. Twelve thousand was his estimate of the number likely to be able to be dealt with in the first year of the campaign. If more in the first year could be dealt with, so much the better. But practical administrators knew it was not likely. After that we could and would have to go faster.

The new Bill and the new conditions on which it was founded, continued the Minister, had brought to light a number of suggestions for additions to our housing legislation. They would be promptly and effectively reviewed. to make sure that nothing was overlooked that could help us to get what we wanted under the new conditions. It would be clear from what he had said that it was not contemplated in any case to replace the direct subsidies that were being ended by any sort of concealed or indirect subsidy for the provision of working-class houses in general. Indirect subsidies must hinder supply in the same manner and measure as direct. Were the Government to allow general subsidies to creep in at the window after they had turned them out of the door, our last state would be worse than the first. We should have slowed down municipal housing, and at the same time we should be hampering private enterprise by subsidised competition, the more formidable for being concealed.

It was not contemplated to make, as the result of the review of proposals for adding to our housing legislation, any changes so sweeping as to amount to a reason why either builders should hesitate to build pending the result of the review, or local authorities should hesitate to make the immediate attack upon their slums that the Government asked them to make. From the review, the Government looked for suggestions for additions that could be made with advantage to the housing powers, but not for alterations in their general structure, such as would interfere with their continuous exercise from the present moment by local authorities.

SOCIETIES AND INSTITUTIONS

GLOUCESTERSHIRE ARCHITECTURAL ASSOCIATION.

Sydney Harbour Bridge.

The annual general meeting of the Gloucestershire Architectural Association was held at the Connaught Rooms, Gloucester, on Wednesday, February 15, when the President, Mr. H. T. Rainger, A.R.I.B.A., occupied the chair. The honorary secretary and the honorary treasurer read their reports for the past year, and the following officers and members of Council were elected for the ensuing year:—President, Mr. C. W. Yates, A.R.I.B.A., F.S.I.; vice-president and honorary secretary, Mr. Harold F. Trew, F.R.I.B.A., A.M.T.P.I.; honorary assistant secretaries, Messrs. C. M. Cameron Johnson, A.R.I.B.A., and W. J. Rogers, A.R.I.B.A.; honorary treasurer, Mr. D. N. London, L.R.I.B.A.; honorary librarian, Mr. F. C. Ravenhill, L.R.I.B.A.; honorary auditor, Mr. H. Ellis Moore, L.R.I.B.A. Members of Council: Messrs. H. Stratton Davis, F.S.A., F.R.I.B.A., Thomas Falconer, F.R.I.B.A., A. Linton Iredale, L.R.I.B.A., H. T. Rainger, A.R.I.B.A., W. J. Rogers, A.R.I.B.A., F. C. Ravenhill, L.R.I.B.A., and H. Ellis Moore, L.R.I.B.A.

The following were elected to serve on the Council of the Wessex Society of Architects in addition to the President and honorary secretary, Messrs. Stratton Davis, Falconer, and Iredale.

The business meeting was followed by a well-attended lecture on the Sydney Harbour Bridge, at which members of the Gloucestershire Engineering Society and other guests were present. The lecturer was Mr. H. Shirley Smith, A.M.I.C.E., of Messrs. Dorman, Long & Co., Ltd., the constructors of the bridge; he had been a member of the staff of Mr. Ralph Freeman, the designer of the bridge. His lecture was illustrated by lantern slides and cinematograph films showing in detail the various phases of the construction. The lecturer traced the history of the scheme for a bridge over the harbour, a project which, he said, was more than 100 years old. Illustrations of various designs submitted were shown, the estimates for which varied from nine million to four million pounds, while the accepted contract was for four-and-a-quarter million pounds. The arch span of the bridge was about one-third of a mile, and the headroom below the roadway 170 ft. The total weight of steel used was about 52,000 tons, of which 26,000 tons was special silicon steel made and rolled in England and shipped to Australia for fabrication and erection. The granite facing for the pylons was obtained from the Moruga granite quarry, 150 miles from the site of the bridge, and men from the quarries at Aberdeen were brought over to work it. The thrust of the arch at each abutment was 40 million pounds, and the bearings weighed 300 tons each. The bridge was erected by means of creeper cranes on the top of the two halves of the arch, which were held as cantilevers by temporary cables which passed through tunnels in the rock on each shore. Altogether, 60 miles of cable, 2¾ in. diameter, was used. The delicate operation of bringing the two halves of the bridge together in the centre was described and shown in detail by the films.

Mr. John Daniels, President of the Gloucestershire Engineering Society, proposed a hearty vote of thanks to the lecturer and to Messrs. Dorman, Long & Co., and this was seconded by Mr. H. T. Rainger, President of the Gloucestershire Architectural Association.

WEST YORKSHIRE SOCIETY OF ARCHITECTS.

Architecture and the Student.

Mr. R. J. Edmondson presided at a meeting of this Society held at the Keighley School of Art on February 23, when a lecture on "Architecture and the Student" was given by Mr. W. M. Keesey, who said that in the past architecture as a subject for the student had been somewhat isolated and unrelated to study in general. This was probably owing to the few available opportunities, which often merely related to archæology. The present day showed immense changes in outlook, as well as in facilities for study. Schools of architecture were springing up all round, with district organisations assisting in the work. By such means a wider horizon was afforded the student, and the corresponding public interest aroused in the subject formed a stimulus to broader views of education. New materials and methods of construction were rapidly affecting design and the tuition which accompanied it, and the latter was being governed by the new demands which invention and industrialism were making upon the architectural treatment of the new and varied problems which the present day was constantly setting the architect to solve. The "Grand Tour," which in centuries past every gentleman of means was supposed to make through Europe, and in which a study of architecture formed not the least feature, had its modern equivalent in the travelling scholarships which were offered in competition by most of the existing architectural schools.

Many slides illustrative of his discourse were shown by the lecturer, who was accorded a vote of thanks on the motion of Mr. G. H. Foggitt, seconded by Mr. Cyril Sunderland.

SHEFFIELD, SOUTH YORKSHIRE AND DISTRICT SOCIETY OF ARCHITECTS AND SURVEYORS.

"Gardens."

The President (Mr. J. Lancashire, F.R.I.B.A.) occupied the chair at a meeting of the Sheffield, South Yorkshire and District Society of Architects and Surveyors recently, when Mr. G. A. Jellicoe, A.R.I.B.A., A.I.L.A., lectured on "Gardens." The speaker commenced by saying that he could not over-stress the value to the community of a full understanding of garden design, and it was remarkable to see how many corporations of English towns had realised that good public parks were an actual commercial asset. This applied more obviously perhaps to such pleasure towns as those of the South Coast rather than to manufacturing towns such as Sheffield; but, nevertheless, the presence of gardens formed a refreshing contrast to the everyday life of the city. That was perhaps the greatest function of a garden—to receive the jaded human being and send him forth refreshed and invigorated.

Public gardens, as well as those of each private house, formed a link of great interest between the gardens of the past and those of the future. He now proposed to take them back into the past and show how different gardens arose under different civilisations, then discuss the principles of garden design as practised to-day, and afterwards launch them into the future. Beginning with the gardens of the Italian Renaissance, the lecturer drew attention to the effect of sensations in a garden upon the individual, and said the Italian had studied "moods." He suggested that the conception of the Italian garden was that it was an extra room of the house. The materials were those of living Nature, and the ceiling was the sky. He travelled briefly through the great gardens of France, Austria and Germany, and coming to England, pointed out to what an extent the English garden was "domestic" rather than "monumental." He gave the social reasons for this, and also emphasised the influence of climate, that made possible trees, flowers and grass that were unsurpassed. The English school of landscape gardening represented, perhaps, the grandest period of English garden design, and its influence was still felt; he gave the reasons why the principles involved won his admiration if not his agreement. The principles of garden design were based on logic, and the lecturer discussed how this theory worked in practice. The garden that performed the duty of being a pleasant place for the human being to occupy, first and foremost was a logical garden; and that which was designed without thought of the human being was illogical. He elaborated this, and said that more discussion had arisen out of this subject than from anything in garden design. In the terms of the popular gardening papers, it was a question of formal *versus* informal gardening, and he considered that each was right within its own sphere. The man who planted a rock garden in his forecourt appeared to him to have confused ideas. The lecturer then left the present day and took his audience into the future, expressing the hope that however frightening were the great communal gardens he showed, the individual would ultimately find his own expression once again

THE GREATER LONDON HOUSING CAMPAIGN

By JAMES P. ORR.

XVIII.—PROGRESS UP TO SEPTEMBER 30, 1932.

The progress of the Greater London housing campaign has been regularly reviewed in **The Builder* since September, 1925. The purpose of this article is to bring this review up to September, 1932. By Greater London is meant Region K of the Ministry of Health's statistics—roughly the area within 15 miles of Charing Cross. Only small houses are taken into account. Houses rated at more than £35 are ignored, since they are rarely occupied by even the best-to-do of the working-classes, and so have no effect on the real housing problem.

State-aided Municipal Enterprise.

The local authorities' output of 4,102 subsidised houses in the six months to September 30, 1932, brought their total post-war output up to 102,435 houses. The L.C.C.'s six-monthly output has been falling rapidly; it was 28 per cent. less in the last six months than in the corresponding period of 1931; but this fall was counterbalanced by a 30 per cent. rise in the output of the other local authorities; so the net result was a fall of only 7 per cent.

The aggregate output of subsidised municipal houses in England and Wales stood on September 30, 1932, at 678,922 houses—roughly 17 houses per 1,000 of population, *i.e.*, nearly 34 per cent. more than the corresponding figure of 12.6 per thousand in Greater London. With well over one-fifth of the population of the whole country, Greater London has some 33,000 less than one-fifth of the country's post-war municipal houses, and its contribution to the aggregate of municipal houses built in the last six months fell considerably short of one-seventh.

Distribution of New Municipal Houses.

By September 30, 1932, the L.C.C. had built 46,329 houses (11,767 in London county and 34,562 outside), and the City and metropolitan boroughs 12,364 houses. The residents of London county had thus been supplied with 58,693 municipal houses, while the 94 local authorities of Outer London had built for their constituents 43,742 houses. These figures represent averages of 13.1 and 11.9 houses per 1,000 of population for Inner and Outer London respectively.

The L.C.C.'s 2,022 dwellings completed in the last six months comprise two groups of 951 and 442 cottages in their vast estates in Becontree and Morden respectively, and 629 flats in their great Central London scheme for the special benefit of families whose work requires that they should live near the centre of London. Other outstanding municipal achievements of the last six months were, in London county, the 154 dwellings completed in Bermondsey, with 175 in Fulham, 168 in Woolwich, 112 in Lambeth and 91 in Poplar; and outside, 218 in Chiswick, 95 in Dagenham, 93 in Barking, 84 in Dartford, 76 in Edmonton and 74 in Willesden. These efforts are the more conspicuous, in that no fewer than 88 of the 124 housing authorities of Greater London built no houses at all during the six months.

Progress Under the 1930 Housing Act.

The great attack on the slums, which the Housing Act of 1930 was intended to inaugurate, still hangs fire, and, outside Bermondsey and Wandsworth, has so far yielded only the most paltry results in London. By the end of September the Act had been in force for 26 months; but only 389 Greenwood houses had been completed in London, viz., 283 in Bermondsey, 92 in Wandsworth, 12 in Epping, and two in Twickenham. Good progress had been made in actual clearance in Bermondsey and Wandsworth; but clearance areas had been declared in only seven of the other 26 metropolitan boroughs, including seven areas declared by the L.C.C.; and no improvement area at all had been sanctioned in Greater London. It is much to be regretted that a start has not yet been made on the novel improvement area procedure; for this is the procedure specially devised to abate overcrowding and prevent its recrudescence; and, moreover, every house built under an improvement area scheme represents a real addition to local accommodation, whereas a house built under a clearance area scheme merely replaces one that is demolished in the scheme, and therefore leaves the total accommodation unaffected in quantity, though of course greatly improved in quality.

State-aided Private Enterprise.

The output of State-aided private enterprise has since 1929, when the subsidy was first confined to houses let at low rents, been almost negligible, compared with its average of 6,000 houses per annum before 1929. The output of the last six months was only 35 and that of the last twelve months only 175 houses; and in the eight years since the 1924 Act was passed only 1,765 houses have been built by private enterprise subsidised under that Act, including 472 built by Public Utility Societies. The high cost of building in 1924 made it evident that the subsidy to private enterprise under the 1924 Act would not produce houses to let at 12s. 6d or less per week, unless the capital were raised at rates of interest considerably below normal. Hopes were, however, centred on the prospect of a fall in cost of building and on a new movement for the formation of housing societies, who were to raise from the charitable public cheap capital in the shape of gifts and loans at low interest. These societies have done admirable work in the face of great difficulties. By September, 1932, they had provided 679 new dwellings in Greater London; and all of these, except the 119 Church Army cottages, were where they were most needed, viz., in blocks in central London; but only the Church Army had provided any really large number of homes with more than two bedrooms. All their 61 flats and 119 cottages have at least three bedrooms, and nearly all these 180 dwellings are let at 12s. or less per week, including rates. The 499 dwellings provided by the other ten new societies include only 160 let at 12s. 6d. or less; and only 87 of these have more than one bedroom.

Most of the big pre-war charitable housing trusts have done their post-war building without subsidy; and, consequently, their dwellings with more than one bedroom are let at rents above 12s. 6d.; but by taking advantage of the Wheatley subsidy the Sutton Trust were able to provide 275 three-roomed flats in Kensington at 12s. 6d. per week. These, with the 180 Church Army dwellings and the 87 three-roomers provided by five of the other new societies, make a total of 542 new homes available for the †poorer classes—a mere drop in the ocean compared with the total urgently required to relieve serious overcrowding in the tenemented houses of central London.

Considering that these societies are in a position to house families who cannot afford the rents of municipal houses, it is a great pity that their work is restricted to such narrow limits by the difficulty of raising capital, and that most of them cater more for the better-to-do than for the poorer classes. The local authorities might do well to give them more help and encouragement—*e.g.*, by presenting them with free sites in consideration of their reserving a proportion of their dwellings for the local authorities' nominees at rents specially reduced by such rebates as the several tenants need. (Cf. the family rebate system described in *The Builder* of December 16, 1932.)

Small Houses Built Without Subsidy.

The decline in the half-yearly output of small houses built without subsidy, which commenced after March, 1931, is, unfortunately, becoming much more rapid. In the last half-year this output was 16,744 houses. The fall of 442 noted in the last review has thus been followed by a further fall of 2,261, in comparison with the output of the six months to September, 1931. Nevertheless, unaided private enterprise has again supplied over 80 per cent. of the aggregate output of aided and unaided building of all kinds in the last six months. The total output of unsubsidised houses since the War had by September 30, 1932, reached 220,373—*i.e.*, 60 per cent. of all post-War houses, subsidised and unsubsidised (367,814).

Included in the 16,744 new houses are 256 houses built by local authorities without subsidy, the chief contributors being Westminster, 84; Barnet, 44; and Sutton, 32. The largest private contributions were in Edmonton, 665; Ilford, 685; Hendon, 573; Southall, 543; Sidcup, 523; and Wembley, 515.

Total Output of Small Houses.

The recent all-round slackening in building enterprise is pretty certain to cause by next March a check to the annual rise in the output of small houses, which has been a standing feature of the London campaign throughout the last four years. The total for the six months, April to September, has never since 1926 been so low as in 1932. Details are compared with those of the whole post-war campaign below :—

Houses completed.	In last six months.	Total post-War.
By subsidised local authorities	4,354	105,407
By subsidised private builders	35	45,006
Without subsidies ...	16,744	220,373
Total	21,133	372,786

These figures, unlike those in previous paragraphs, include the 4,972 houses erected by local authorities in discharge of their rehousing obligations in improvement and reconstruction schemes under Part II. of the 1925 Housing Act; but it has to be remembered that such houses, like the 389 for which the subsidy under the 1930 Act is given, do not add to the sum-total of small houses, since they merely provide alternative accommodation in place of houses demolished in the main schemes.

To get a correct picture of the building-trade's progress towards overtaking the post-war shortage of small houses, it is necessary to deduct from the figures of total output given above not only the 5,361 municipal houses erected under rehousing obligations, but also the vast number of small dwellings demolished in private redevelopment operations or converted from residential to commercial user since the war. Of these there is, unfortunately, no record available.

London compared with Birmingham, Liverpool and Manchester.

The figures in Birmingham, Liverpool and Manchester corresponding to the 12.6 subsidised houses per thousand of population built up to September 30, 1932, by the local authorities of London (v. para. 3) are 37.6, 26.4 and 21.4 respectively. For every home provided by the local authorities of London per thousand of population, the northern cities have provided :—Birmingham, 3; Liverpool, 2.1; and Manchester, 1.7 homes.

In aggregate output of municipal and private enterprise together, the greater activity of private enterprise in London tells heavily in improving London's position relatively to the northern cities. Here London's average of 45 houses per thousand of population is just above the 44 of the whole country, and about one-third above the 34 of Liverpool and the 33 of Manchester; but the figure for Birmingham, 53, is nearly 20 per cent. above that of London.

In London well over two-thirds of the post-

* See *The Builder* of 22.i.26; 9.vii.26; 18.ii.27; 15.vii.27; 20.iv.28; 10.viii.28; 4.i.29; 28.vi.29; 22.viii.30; 2.i.31; 7.viii.31; 4.iii.32; and 12.viii.32.

† In these reviews the term "poorer classes" is used to indicate families whose earnings set against essential needs leave a margin too small to permit of their paying a rent of more than 12s. 6d. per week, including rates.

war output of small houses has been contributed by private enterprise; in the northern cities well over two-thirds by local authorities. This means that the working-classes get far more help from the housing subsidy in the North than in London; for few of the houses provided by private enterprise are available for any but the higher-paid ranks of the working-classes.

Cost and Rent.

The house-building contracts sanctioned by the Minister of Health during the half-year were too few and too small to supply material for any useful comparison of costs. Only six of the 122 local authorities gave out any contracts at all; and there was no approach to the specially low costs referred to in the last review (*The Builder*, August 12, 1932), viz., the £256 constructional cost of Dartford cottages with average floor area 626 sq. ft., and the £492 all-in cost of Lewisham flats with average floor area 650 sq. ft. The lowest contract in flats in the new half-year was for 93 Southwark flats with average floor area 579 sq. ft. costing for construction alone £521 each; and the lowest in cottages was for 62 Beddington cottages with average floor area 763 sq. ft. costing £304 each. These costs are not low enough to bring even three-roomers within reach of the poorer classes under the ordinary system of applying the subsidy; but if the family rebate system were adopted, and the housing scheme were debited with only the housing (not the full commercial) value of the site, it would be possible, even without a subsidy, to bring at least half of the Southwark flats within reach of the poorer classes.

As usual, only a very small proportion of the small dwellings built in the new half-year were let at rents of 12s. 6d. or less. The lowest rent of a new three-roomer on the L.C.C. estate was 13s. 1d., and in the L.C.C.'s Central London estate the range of rents for three-roomers was from 16s. 11d. to 22s.

It is satisfactory to learn that as a result of suggestions made by the L.C.C. to such of their tenants as seemed able to pay rents of unsubsidised houses, several have given up subsidised houses and so made way for poorer tenants.

Present Position.

The great bulk of the 21,133 houses added to the pool of small houses during the last half-year were by reason of their high rents of no use to the poorer classes. Only 4,254 of them were municipal houses; only 3,004 of these were available for residents of London County; and only 1,611 of these 3,004 were situated within the county. Even the latest and biggest subsidy was insufficient to bring any of the new Greenwood houses, except the handful that had only one bedroom each, within reach of the poorer classes.

Consequently, the outcome of the building trade's efforts in the last half-year has, as usual, been a considerable improvement in the housing position for the lower middle and the better paid working classes, but accompanied, unfortunately, by a serious worsening of the position for the poorer classes by reason of the intensification of overcrowding that must result from depletion of the pool of cheap dwellings as a consequence of widespread decontrol of dwellings vacated in the series of moves which follow the appearance of each new house in the market.

The annual reports of the Health Officers of Metropolitan boroughs issued during the half-year nearly all expressed grave concern at the continuance and intensification of overcrowding and other bad housing conditions by reason mainly of lack of alternative accommodation for overcrowded families at rents which they could afford; yet there was little response to the Minister of Health's appeal for concentration on small dwellings that could be let at low rents. Only thirteen of the 122 local authorities added materially to their sanctioned programme during the last half-year.

Prospect.

At the end of September the prospect for the poorer classes was very black. Since then, the Rent Restriction Bill and the Housing Bill have appeared. The former definitely improves the prospect for the poorer classes. It defers the decontrol of dwellings of £20 or less rateable value till 1938; and, subject to the existence of alternative accommodation, it enables a landlord to dispossess a tenant whenever he likes. This opens the way to ending the scandalous abuse of the protection from dispossession afforded by the Rent Restriction Act, under which well-to-do families have selfishly entrenched themselves in cheap dwellings, which they ought to have vacated years ago to make way for poorer families.

For reasons set out in an article on the Housing Bill in *The Builder* of January 20, this guarantee scheme is unlikely to prove workable in London; and the figure of £360, on the attainment of which as the average all-in cost of a dwelling the Minister of Health's argument justifying the abolition of the Wheatley subsidy depends, is not likely to be approached in central London.

As indicated in para. 20 of the writer's last review (*The Builder*, August 12, 1932), the abolition of the present system of administering the Wheatley subsidy as a subsidy to mere housebuilding is, in the writer's opinion, fully justified and, indeed, urgently called for, in order to stop the rapid diminution of the pool of cheap dwellings which results from it. But the immediate abolition of the subsidy will do great harm in London, because it will retard, if not block altogether, the repletion of the pool of cheap dwellings, which is what is wanted to solve the central London housing problem. What is needed is not the abolition of the Wheatley subsidy, but a change in the method of administering it. It should be confined to families scheduled as most urgently in need of relief from bad housing, whether in slums or in overcrowded houses. It should be administered under the family rebate system (*The Builder*, December 16, 1932), so as to give scheduled families the rent-rebates they need only so far as and for so long as they need them. To ensure economy, the Exchequer subsidy should be continued to a local authority not necessarily for forty years, but only for so long as a five-yearly examination of the housing position shows that the continuance of the low, subsidised rents is necessary.

Alternatively, the scope of the 1930 Act should be extended so that it may cover the rehousing of the most overcrowded families in houses outside clearance and improvement areas; but here again strict confinement of the subsidy to really urgent cases and adoption of the family rebate system are essential to economical administration.

If the Bill is amended on some such lines as are indicated above, then the combination of the two new Acts will hold out a most refreshing prospect of early advance towards solution of the real housing problem of central London.

DOMESTIC ELECTRIC LIGHTING

Mr. R. O. Ackerley spoke on "Developments in Home Lighting" at the Conference for Architects, held at the Lighting Service Bureau on February 1. The progressive reduction in the cost of electric lamps and current over the last ten years had resulted, commenced the lecturer, in twice as much light being available for the same cost as ten years ago. When electric lighting was first introduced into homes its development was limited, firstly, by the necessity for using low-power lamps, and, secondly, by the slavish following of gas practice in this matter. People were slow to realise that, whereas with open flame illuminant it was not possible to have the lighting point hanging less than 3 ft. from the ceiling or more than 1 ft. from the wall, with the flexibility of electric lighting it was possible to have the units wherever they were most convenient. An important development had been concerned with fittings and glassware. British research in glass manufacture led the world, and British manufacturers were now able to equal or excel the foreign product in quality.

Classes of Home Lighting.

Lighting in the home could be divided into three main classes :—

(1) Amenity lighting—a combination of utilitarian and decorative, such as was found in the principal living-rooms, where light must be adequate in efficiency to carry on ordinary operations, but at the same time was a potent factor in influencing comfort from the æsthetic point of view.

(2) Purely utilitarian—such as, for kitchens, sculleries, cellars, etc.

(3) Purely decorative—such as, illuminated curtains and niches, garden floodlighting, etc.

The architect had, when considering the lighting of a house, to consider whether the house was being built for a known occupier (in which case the owner's taste would dictate the requirements very largely), or where the ultimate occupier was unknown, as with blocks of flats or housing estates. In the latter case it would be necessary to arrange for a system of lighting which would be sufficiently flexible to allow the subsequent occupier to exercise his own taste. The speaker gave indications of lighting requirements in the average home which might serve as a guide in this respect. In the sitting-room, for instance, it was important to have two or three switches near the door to control general lighting to the intensity required, and to have a sufficient number of plug points to allow for floor and table standards. In the bedroom, a two-way switch from the door and bed was important, and light should be provided over the bed, for the dressing-table, and for mirrors. The placing of lights in the kitchen was very often carried out without regard to the places where the main operations would be carried out, and there was room for much improvement here. There were also many places in the average home where lighting points—which were inexpensive to instal and cost practically nothing to run—added very considerably to the comfort of the tenant.

Discussion.

Mr. C. Lovett Gill, F.R.I.B.A., in opening the discussion, said that one should not consider lighting in the same way as one considered the mileage per gallon of petrol in the case of a motor car; it should be accepted as an essential part of the running of a house.

The lighting of staircases was a difficult problem, and in this connection one might with advantage take a tip from the underground railways. It would be valuable to have a system whereby the light was shed from underneath, so that it would be invisible when one walked up the stairs, but at the same time would show a very good light on the stairs themselves. Finally, commenting upon the British illuminating glassware exhibited, he said that they savoured too much of hospital and warehouse fittings, and he did not like any of them. They were not designs which would please the architectural eye.

Mr. White, referring to the exhibits of the British illuminating glassware, regretted that those forms of glassware had been designed on the Continent, and suggested that British glassware manufacturers were doing themselves incredible harm by copying Continental forms. There were many designers in this country who would be only too willing to collaborate with British glassware manufacturers in designing attractive forms.

Mr. Ackerley, replying to the discussion, said that the electrical industry had been pleading for years for the co-operation of architects in matters of design, and he submitted that, if architects had faults to find with British designs of illuminating glassware, or anything else, it was largely their own fault; it was for them to make suggestions and to ask for the designs they wanted, and the manufacturers would be quite prepared to fall in with their suggestions and to produce the designs required.

VAUXHALL WORKS, LUTON

Increasing business has made it necessary for Messrs. Vauxhall Motors, Ltd., greatly to enlarge their existing factory at Luton, and new works (some of which are illustrated this week) consist of alterations and re-organisation of existing buildings, together with the addition of new structures, some of which are joined on to existing buildings and others detached structures. Owing to the necessity for carrying out the building works very rapidly, and at the same time keeping the factory in constant operation, the contracts for each department were let separately, and several contractors have been, and are still, working on the site.

The extension to block "H" consists of an open engineering shop, the main portion of which has a length of 285 ft. and a width of 240 ft. The contract was let to Messrs. Rice and Son, Ltd., of Stockwell. The construction is of steel frame, with brick panel enclosing walls, and the roof is covered with Robertson's protected metal. The principal sub-contractors were as follows :—

Aston Construction Co., Ltd., steelwork; Johnson's Reinforced Concrete Engineering Co., Ltd., concrete; Carrier-Ross Engineering Co., Ltd., ventilation; Caxton Floors, Ltd., floors; Robertson's Protected Metal (Wolverhampton Corrugated Iron Co., Ltd.), roofing; Williams, Gamon and Co., Ltd., glazing and windows; H. and C. Davis and Co., Ltd., sanitary fittings; H. and C. Davis and Co., Ltd., stairs; Haskins, roller shutters; Clarke and Vigilant Sprinklers, Ltd., fire hydrants; Shoolbred Electrical Co., Ltd., electric lighting; Salter, Edwards and Co., Ltd., asphalt.

Work begun August 15, 1932: bulk of building handed over November 29.

Block "B" consists of a similar open engineering shop, having a total length of 239 ft., and a width of 130 ft. 9 in., and 25 ft. high to the tie beams. This building is also of steel frame construction. The general contractors were the Luton Building Co., Ltd., of Luton, and the principal sub-contractors were as follows :—

A. J. Cripps and Co., steelwork; Johnson's Reinforced Concrete Engineering Co., Ltd., and Concrete Structures, Ltd., general foundation work, retaining walls and floor; Carrier-Ross Engineering Co., Ltd., ventilation; Jos. F. Ebner, wood block floors; National Brick Co., Ltd., hollow tile blocks, enclosing panels between steel stanchions; Robertson's Protected Metal (Wolverhampton Corrugated Iron Co., Ltd.), roofing; Mellowes and Co., Ltd., glazing; Crittall Manufacturing Co., Ltd., windows; Leeds Fireclay Co., Ltd., sanitary fittings; H. and C. Davis and Co., Ltd., stairs; Cecil Cooper and Co., Ltd., electric lighting.

Block "C" has been erected for general stores, and is of similar construction to block "B," except that the floor rests direct on made-up solid ground. This building has a length of 226 ft., and a width of 164 ft., and is planned so that a line of railway track runs into the building. The contract was placed with Messrs. Rice and Son, Ltd., of Stockwell. The principal sub-contractors were as follows :—

Archibald Dawnay and Sons, Ltd., steelwork and enclosing partitions; Johnson's Reinforced Concrete Engineering Co., Ltd., and Concrete Structures, Ltd., reinforced concrete work; Carrier-Ross Engineering Co., Ltd., ventilation; Jos. F. Ebner, wood-block floors; Robertson's Protected Metal (Wolverhampton Corrugated Iron Co., Ltd.), roofing; Mellowes and Co., Ltd., glazing; Crittall Manufacturing Co., Ltd., windows; Davis, Bennett and Co., Ltd., sanitary fittings; H. and C. Davis and Co., Ltd., stairs; Haskins, roller shutters; Clarke and Vigilant Sprinklers, Ltd., fire hydrants.

Work begun September 26, 1932: building handed over January 9, 1933.

The fronts of blocks "B" and "C" are finished with "Snowcrete" facing, the two buildings being united by an archway which spans the service road between the two structures.

The new laboratory building and the electric sub-station form a separate structure, facing Kimpton-road. The general contractors were the Luton Building Co., Ltd., of Luton. The principal sub-contractors were :—

Edward Wood and Co., Ltd., steelwork; Johnson's Reinforced Concrete and Engineering Co., Ltd., foundation work; Carrier-Ross Engineering Co., Ltd., ventilation; Jos. F. Ebner, wood block floor; Caxton Floors, Ltd., floors and roofs; Williams, Gamon and Co., Ltd., windows; H. and C. Davis and Co., Ltd., and Davis, Bennett and Co., Ltd., sanitary fittings; Haskins, roller shutters; Cecil Cooper and Co., Ltd., electric lighting; Salter Edwards and Co., Ltd., asphalt; Paragon Glazing Co., lantern lights.

Work begun August 12, 1932: building handed over November 5.

The new timber stores is of steel-frame construction, with protected metal roof. The general contractors were Messrs. J. Jarvis and Sons, Ltd., of Wormwood-street, E.C. The principal sub-contractors were :—

Edward Wood and Co., Ltd., steelwork; Diespeker and Co., Ltd., flooring and flats; Robertson's Protected Metal (Wolverhampton Corrugated Iron Co., Ltd.), roofing; Paragon Glazing Co., glazing; Crittall Manufacturing Co., Ltd., windows and lantern lights; Haskins, roller shutters; Cecil Cooper and Co., Ltd., electrical work.

Work begun September 5, 1932: building handed over November 29.

The extension to block "G" is a reinforced concrete multi-story structure, consisting of ground, first and second floors, and follows the line of the old building adjoining. The general contractors are Messrs. J. Jarvis and Sons, Ltd., of Wormwood-street, E.C. The following were sub-contractors :—

Aston Construction Co,. Ltd., steelwork; Concrete Structures, Ltd., reinforced concrete; Robertson's Protected Metal (Wolverhampton Corrugated Iron Co., Ltd.), roofing; Williams, Gamon and Co., Ltd., glazing; Crittall Manufacturing Co., Ltd., windows.

Work begun October 24, 1932: ground floor handed over, and first and second floors well advanced.

The whole of the paint for the new buildings has been supplied by Messrs. Ingham Clark and Co., of Victoria-street, S.W.

Messrs. E. Howard and Partners are the architects.

ILLUSTRATIONS.

(*Continued from page* 370).

doors; Sturtevant Engineering Co., Ltd., heating and hot water installation; J. B. Marr and Co., Ltd., wiring for electric light and power; Crittall Manufacturing Co., Ltd., glazed metal partitions in factory; Sankey, Sheldon, Ltd., glazed metal screens in offices; Potter Rax Gate Co., Ltd., collapsible gates and shutters; Samuel Elliott and Sons (Reading), Ltd., circular revolving doors; Doulton and Co., Ltd., sanitary fittings; Wilmer and Sons, Ltd., iron stair cases; H. and C. Davis and Co., railings and gates; Athena Composition Flooring Co., Ltd., jointless floor; Faience and Tile Crafts, Ltd., tiling, terrazzo partitions and paving; Trussed Concrete Steel Co., Ltd., Hyrib lathing and partitions; Nettlefold and Sons, Ltd., locks and door furniture; Lamson Pneumatic Tube Co., Ltd., conveyor; J. P. White and Co., of Bedford, flush veneered doors; Pollard and Co., Ltd., metal shop fronts.

The quantity surveyors were Messrs. Josling and Hamlyn.

New Public Offices, Lagos, Nigeria.

This building has been erected by the Public Works Department for occupation of the Administrator to the Colony and his officers, and medical and sanitary department. It is constructed entirely of concrete blocks, the cornices, moulds and pediments, etc., being pre-cast or *in situ*. The roof is covered with concrete tiles toned down with lampblack, the projecting wing at side having a concrete flat. The windows are in metal, and the joinery and furniture throughout was made by the Public Works Department. The cost of the building was £40,000, which works out at 1s. 1½d. cube. The keynote of the planning is cross ventilation to all rooms, necessitated by great humidity and climatic conditions.

The architect is Mr. Henry A. Porter, F.R.I.B.A., Senior Architect, Public Works Department, Lagos.

LAW REPORTS

King's Bench Division.

Mr. Justice Macnaghten.

ACTION BY ARCHITECT FOR FEES.

This was an action brought by a London architect to recover from the defendants, Traders Markets, Ltd., of The Mall, Ealing, Middlesex, £1,050 he alleged was due to him for services rendered and work done as architect, such as the preparation of plans, specifications, measurements, etc., in connection with the proposed erection of some flats in High-street, Fulham, S.W., during the year 1930.

The defendants pleaded a denial of liability. They admitted that they agreed to employ the plaintiff as architect to prepare certain preliminary drawings for a fee of 25 guineas, but they denied that the plaintiff had an agreement to be paid for anything further

The defendants agreed that if the building as proposed was erected, the plaintiff would have been entitled to fees amounting to £1,500 for drawings, plans, supervision, etc., but they alleged that as the erection of the proposed building was abandoned in October, 1930, he was not entitled to anything further than the 25 guineas. The defendants further alternatively pleaded that if the plaintiff was entitled to be paid on *quantum meruit* the terms he had claimed were excessive.

His lordship, after hearing the evidence, gave judgment for the defendants, holding that the work for which he claimed had been done by the plaintiff gratuitously, in the hope that if the proposed building had been erected he would have secured the larger contract.

King's Bench Division.

Mr. Justice Swift.

ACTION ON GUARANTEE FOR BUILDING MATERIALS.

Samuel Williams and Sons, Ltd. *v.* **Mitchell and Gowing.**

In this case Samuel Williams and Sons, Ltd., building merchants and contractors, of Lloyds-avenue, E.C., claimed £1,001 5s. 10d. upon a guarantee dated October 13, 1932, from the defendants, Mr. D. W. Mitchell, of Alverstone-avenue, Wimbledon Park, S.W., and Mr. C. H. Gowing, of Paxford-road, Wembley, N.W

Mr. Gowing pleaded a denial that he was indebted to the plaintiffs, as he had been relieved from his guarantee on December 2, 1932, by reason of the plaintiffs giving time to the principal debtors, D. W. Mitchell and Co., Ltd., builders, and of which company Messrs. Mitchell and Gowing were directors. Mr. Mitchell was not represented in the proceedings. The claim arose out of materials supplied to D. W. Mitchell and Co., Ltd. The plaintiffs alleged that their agreement of December 2, 1932, with D. W. Mitchell and Co. was not a binding agreement to give time, and that if it was it was quite immaterial, because it was given with the knowledge and consent of Mr. Gowing at his request and on the understanding that his liability under the agreement was not affected.

After hearing the evidence, his lordship gave judgment for the plaintiffs for the amount claimed with costs.

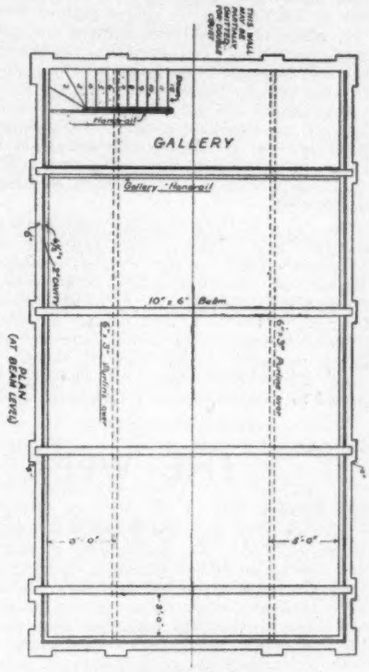
SQUASH RACKETS COURTS

THEIR DESIGN AND CONSTRUCTION.

Few games, probably, are enjoying a greater amount of popularity at the moment than squash rackets. For this the reasons are not far to seek, the opportunities for the maximum of exercise in the shortest time, coupled with the genuine thrill that the game provides, being chiefly responsible. The number of courts built is steadily increasing and are being found by their owners not only to be a source of great enjoyment but also of profit. The opportunities presented in the latter connection to private enterprise and municipal authorities are considerable. We give below some details of the construction of a squash rackets court. These, the plans, section and photograph accompanying them, are taken, by permission, from a brochure, "Squash Rackets Courts," issued by the British Portland Cement Association, Ltd., of Dartmouth-street, S.W.1.

The simplest form of squash rackets court with the essential requirements consists of four enclosing walls, floor and roof-covering, the latter being provided with the necessary glazing to admit light. To the above can be added a spectators' gallery, artificial lighting in addition to the natural light, and enhanced conditions of play by means of proper ventilation. Where lavatory and changing accommodation are not available these can be added to make the unit complete.

Walling.—With regard to the walling: this is one of the first essentials. The game is one of the fastest extant, and consequently the playing surfaces must be true and the rebound equal in all instances. To obtain the large playing expanse, viz., 32 ft. long by 15 ft. high a monolithic concrete construction is advisable, both on account of the strength required to carry the roof and to resist the pressure that is likely to be brought to bear from external elements. The usual form of walling employed is that shown in the plan where a 4½-in. concrete interior leaf is provided; a 4-in. or 6-in. external leaf strengthened by exterior buttresses, and a 2-in. cavity between. These two leaves—the inner and outer—are attached to one another during construction by means of bonding ties, but in no case should these be attached in positions where buttresses occur. Alternatively the wall may be of solid concrete with or without reinforcement, the thickness varying according to circumstances. When the first-named system is employed, the inner leaf is constructed of concrete formed of a porous aggregate such as crushed brick, crushed clinker or good coke breeze. This may be introduced in the form of blocks or slabs, or it may be poured between shuttering, but it must be finished with a true surface, both horizontally and vertically; the outer leaf can be constructed of similar material and the exterior face rendered weatherproof by means of Portland cement rendering; or, as is usual and preferable, the whole wall may be of impervious concrete, either in the form of blocks or poured *in situ* between shuttering; when this latter method is employed the external face may be treated in various ways, either by exposing the aggregate, by external rendering, or by one of the various methods of obtaining a suitable and pleasing concrete finish.



A Typical Plan.

Internal Surface.—Having provided for the walling, the next point is to provide for a good hard, even surface internally—one which will not need painting or other periodical attention, but will remain permanently hard and smooth; at the same time this surface must be porous in order to prevent condensation which is so frequently apparent in many courts owing to the surface being painted or too dense, and to the difficulty of getting adequate ventilation. Such a finish can be obtained by the use of certain aggregates, such as crushed brick mixed with white hydralime and white Portland cement; this should be mixed in such proportions and applied in such a manner as will bring it to the necessary density.

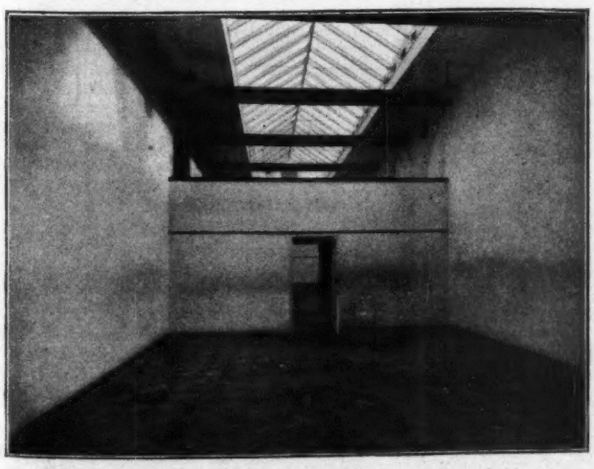
Floors.—The floor is the next point to decide upon, and it is necessary to consider what is the best form this should take. It has been stated that the best floor on which to play is a solid concrete sub-base with a porous concrete topping, or similar construction, on which is laid an ordinary wood-block floor on the usual bitumastic seating. There are some, however, who consider that a solid floor is liable to produce heaviness in play, and to obviate this, properly ventilated hard wood flooring laid on fillets or joists should be substituted. There is no difficulty in obtaining proper ventilation to ensure a free access of fresh air to either fillets or joists in order to prevent the trouble that is sometimes found in connection with this type of floor.

Roof.—The construction of the roof is a point that needs careful consideration. The height of the lowest member is defined, but where artificial lighting is used allowance must be made for providing the lighting points so that no shadow is cast; besides this, the means of ventilation has to be dealt with, and the suitable distribution of the glazing so as to prevent condensation, and precautions must also be taken against water dropping or leaking on to the floor. The cross section given on this page indicates a suitable method of construction. The ventilation to a court is introduced by means of large air gratings just above the floor level, through the walling and striking board, this being the only available position at a low level. The egress of the air is arranged for by means of louvres, usually just under the glazing, and a through current at the gable ends of glazing or roof. The one feature that is of different material from that of the structure is the entrance door to the court itself; this door should be constructed with a plain surface on the court side and be hung to a frame which is flush with the interior walling; a sunk fastening and handle should be provided.

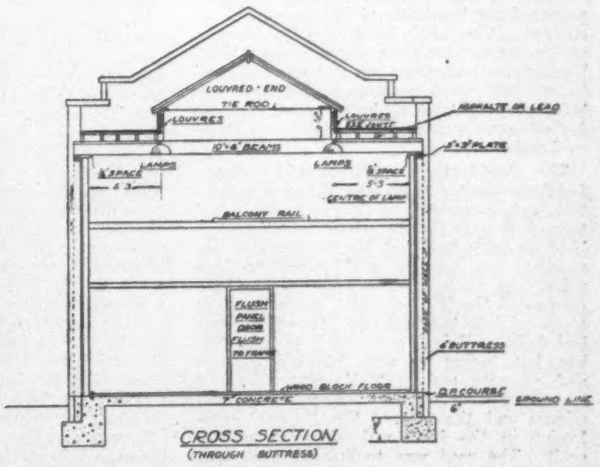
Artificial Lighting.—Artificial lighting is generally provided for by means of electricity; certain points for the lights are fixed and there are four lights of 400 watt power, throwing light downwards, and two of 300 watt throwing it on to the end wall. These lights are provided with reflectors, and, naturally, have to be protected by means of wire guards.

Dressing Accommodation.—In a small isolated court a certain amount of dressing accommodation can be provided under the gallery; a shower bath, although regarded as a luxury, is almost a necessity, as, the game being so strenuous, it is an added comfort to be able to take a shower and to have a rub down. Of course, the provision of lavatory accommodation and wash-hand basins is essential, and a sufficient number of lockers and seating space can generally be arranged for.

Cost.—With regard to the cost for the erection of a squash rackets court, a simple design without further accommodation than the gallery, but with artificial lighting in addition to the ordinary glazed roof, should be erected for £600—provided that what may be termed normal conditions obtain.



Interior of Squash Court, Wentworth Golf Club.



A Typical Cross Section.

THE INSTITUTE OF BUILDERS

ANNUAL DINNER.

Mr. Thomas Howarth, J.P., presided over the annual dinner of the Institute of Builders, held on Thursday, February 23, at Carpenters' Hall, E.C.

Amongst the large company present were :—The Rt. Hon. Lord Rochester, C.M.G., Sir Philip Sidney Stott, Bt., F.S.A., Sir Raymond Unwin, P.P.R.I.B.A., Mr. C. Gerald Eve, P.S.I., Mr. B. C. Aldous (Senior Vice-President), Sir William Rothenstein, M.A., A.R.C.A., Mr. Norman O. Searle, A.R.I.B.A., Mr. R. L. Roberts, M.A., Sir Henry Pelham, K.C.B., Mr. Percy F. Gleed, F.S.I., Mr. S. P. Purkiss-Ginn (Vice-President), Mr. Horace W. Langdon, F.S.I., Mr. A. N. Roberts, Mr. W. H. Hickson, O.B.E., Sir Murdoch MacDonald, P.Inst.C.E., Mr. J. Roy Lancaster (Master of the Worshipful Company of Carpenters), Mr. R. Arthur Costain, Major F. A. Wallis, M.C. (Vice-President), Sir George W. Humphreys, K.B.E., M.Inst.C.E., Mr. Maurice Chesterton, F.R.I.B.A., Mr. H. Warre Cornish, Mr. T. Alwyn Lloyd, F.R.I.B.A., Mr. W. W. Finlayson, Mr. W. H. Forsdike (Vice-President), Mr. Eric F. Dickins, L.R.I.B.A. (Master of the Worshipful Company of Tylers and Bricklayers), Alderman C. H. Bryning, J.P., Mr. G. S. Harding (President, the National Federation of Building Trades Employers), Sir J. Walker Smith, F.S.I., M.P., Mr. W. Thorpe, Mr. W. Gorman, K.C., Messrs. A. N. Dove, C. J. Trollope, L. U. Grace, F. Milton Cashmore, O. Campbell-Jones, C. C. Trollope, A. D. S. Rice, E. J. Brown, F. A. Minter, C.V.O., Alister MacDonald, P. J. Westwood, L. M. Gotch, F. R. Nelson, E. Stanley Hall, A. B. Falkner, Stanley Hamp, F. J. Wills, H. T. Holloway, J. H. Barker, O. Maxwell Ayrton, James Denver, and P. J. Spencer, M.A. (Secretary).

Grace having been sung and the loyal toasts honoured,

Lord Rochester submitted the toast of "The Institute of Builders," and remarked that it was good to see the cheery optimism of those gathered round. It was right that there should be confidence, for we should need all our courage to get through. He had asked himself what might be the secret of the builders' cheeriness, and he had arrived at the conclusion that they went about their business thinking as though success were certain and working as though it were not. When one realised that next year the Institute of Builders was 100 years old, one felt entitled to congratulate the body on what it had done and was going to do. Its greatest work had been done in connection with education, and the past year had seen the setting up of a scheme of National Certificates, in conjunction with the Board of Education. The value of that work was inestimable, for, as we prepared for the trials of life, so should we succeed. The need for technical education was never greater than at the present time. The economic situation was at bottom a moral issue. All, in some sense or another, were builders : might we all be certain that, in so far as we were concerned, the stone might be well and truly laid.

The President, in response, said that the Institute was trying to lead the next generation and prepare them for a better world than had gone before. The traditions behind us were fine, but the present age was moving, was restless, and seemed to lack poise, and we seemed scarcely yet to have discovered the line on which we were going to travel into the new era. Our forefathers had built well in stone and brick and timber, but to-day we were building in steel and concrete and synthetic materials, and we were getting to realise the need for applied science and the uses of the chemist's profession in the further development of the craft. The need was to link up the finest and best traditions of the past with the knowledge and new ideas of the present. Members of the Institute at home and abroad deserved thanks for the efforts they were making to further the Institute's ideals. He asked that the Government should not cut the grants to technical schools, grants which were so greatly needed, lest the young life should be stunted. As to trade conditions, it was difficult to be optimistic when business was lean, when one had to pay off one's best hands and even apprentices. It could not be said that there was a glut of work, yet, when one looked around, one saw great needs unfulfilled. In his opinion, the Government had done a great harm in taking away the opportunity for work. "Evil is its own executioner," it had been said, and the country was now paying away £200 a minute, £130 millions a year, in unemployment relief, and getting nothing in return. That money should be put to providing something worth while.

The toast of "The Guests" was proposed by Mr. Basil Aldous, who expressed the gratitude of the Institute to the Worshipful Master of the Carpenters' Company—to whose Court the Institute were indebted for their using the Hall that night. It was a pleasure to welcome so many guests, and also to see so many friends from the North.

Sir Philip Stott, Bart., in replying, appealed to builders generally—wherever opportunity and power occurred—to use their influence that the beauty of the countryside should not be despoiled. The time would come when even the youngest present would have done with the toil of building and would want to retire to a quiet, beautiful spot not spoiled by irreligious building. He asked that in their youth they would keep unspoiled those places where they might return to enjoy the quiet and peace. Another thing they could do was to induce the building owner, wherever they could, to use as much as possible of local materials. Times in the building industry were, of course, bad, and 90 per cent. of the building that went on seemed to be for public works, and only 10 per cent. for private enterprise. It was a matter for regret that the great bulk of building work was paid for by the rate- and tax-payer. Until the figures he had given were reversed, he believed this country would never prosper.

Sir William Rothenstein, who also responded, said that he had not realised how much of the Institute's attention was given to education. The assets of a country did not lie in bankers' tills, but in the minds and efforts of its children. As for Great Britain, her young people were all right, and when we had learned to make the best of them, our country would again be all right.

The speeches were interspersed with a delightful programme of music, given by the band of H.M. Royal Engineers, and by the Eton Singers.

THE WEEK IN PARLIAMENT

The Housing Bill.

In Committee with the Housing (Financial Provisions) Bill, Mr. Greenwood moved an amendment to except houses in rural areas from the scope of Clause 1—that is to say, to permit the continuance of the subsidy for those houses. He submitted that under the Bill as it stood, no houses would be built adequately to meet the needs of the countryside. Up to the end of last year the number of houses built under the Act of 1924 for rural workers was 26,208, of which no fewer than 24,500 were built by local authorities and the remainder by private enterprise. Those houses would not have been built but for the Act of 1924, and local authorities could not deal with the position in rural areas if, as was proposed, the 1924 subsidy was to be taken away from them.

The amendment was, however, resisted by the Minister of Health, Sir Hilton Young, who said that there was a better prospect of more new houses being obtained under the Bill than there was before, because subsidised competition was being cleared away from the path of private enterprise. There was no case at all for special treatment of the residents in rural areas other than agricultural labourers, and the passing of the amendment would do no good to agricultural labourers. The population of rural areas was shrinking, and the problem was not the number but the right sort of houses. The agricultural labourer could not pay the rents of the subsidised houses, and the policy of the Bill was to continue to give help in the only form in which it could be of any use—namely, for reconditioning existing houses, which, after reconditioning, could still be let at rents which the agricultural labourer could pay. There was a perfectly good Act for that purpose, but it had not been used, and he proposed to take a vigorous initiative in calling the attention of the responsible authorities to it. It had been suggested to him by men of practical knowledge that the reason for the insufficient use of the Act was that it had been too exclusively left to county councils. Some county councils had done excellent work, but, on the whole, there had been insufficient initiative, and he proposed that there should be a more free transfer from the county councils to the authorities of the county districts. The subsidies under the Act of 1930 were also available to the rural authorities for clearing the rural slums. With the assistance of these subsidies, the replaced houses could be let, in most areas, at 3s. or 4s. a week, inclusive of rates.

The amendment was negatived by 305 votes to 51.

Mr. McEntee moved an amendment to extend for six months after December 7, 1932, the period during which the subsidy should be granted to local authorities which had housing schemes in preparation.

Sir Hilton Young said that the substitution of another fixed date, such as the amendment proposed, would not provide elasticity. The reasonable way to deal with the matter was to have regard to the state of development of the plans. They did not want to encourage a lot of artificially stimulated plans, but to make sure that every *bona-fide* plan should have a chance of consideration.

The amendment was negatived by 247 votes to 50.

Sir Hilton Young then moved an amendment, which was agreed to, providing that if the Minister was satisfied that proposals for providing or promoting the provision of houses under the Acts concerned had been prepared and were substantially ready to be submitted to him before December 7, 1932, he might, subject to the approval of the Treasury, treat the proposals as if they had been submitted to him before that date.

Working-class Dwellings.

Captain Erskine-Bolst asked the average estimated construction price of working-class dwellings which had been commenced by local authorities since the announcement that the subsidy would be no longer forthcoming.

Mr. Shakespeare said he regretted that information in the form desired was not available, but the average building cost of State-assisted non-parlour houses included in contracts let and in direct labour schemes commenced by local authorities in England and Wales during the month of December last was £296. The corresponding cost for January was not yet available.

ARCHITECTS' AND BUILDERS' INQUIRY BUREAU

We are glad to give questions and answers, but cannot accept responsibility for contributed replies, especially on legal matters.

We do not undertake to reply to inquiries concerning proprietary materials.—ED.

QUESTIONS.

Defective Floor.

SIR,—During the autumn of last year I built a country cottage for a client. I had no rain until the building was covered. Reinforced foundations are used, with 6 in. concrete over site and 18 in. sleeper walls. It was perfectly dry. My client desired an American floor, ⅞ in. by 2½ in., which I laid with secret nailing to floor joists. The flooring appeared perfectly dry. About two months after it was laid it became "springy," and in some places it has cockled. I can put the cockled part right, but can you advise me with regard to the spring? After it was laid we had two or three months of very damp weather, and about twenty feet from the house is a lake. When I finished the floor it was satisfactory in every way. The room is 20 ft. by 15 ft.

BUILDER

Smoky Chimneys.

SIR,—I am puzzled by two instances of smoky chimneys. When the door and windows are closed the chimneys smoke slightly, but if there is a small window open or the door is slightly ajar, they do not smoke. Could any of your readers tell me the cause of this and suggest a remedy? F. M.

Building Development Statistics.

SIR,—I am anxious to get some reliable statistics of the annual growth of building development in the country during the past few years. It is probable that the Government will have statistics of the municipal housing during the period, but I want to go more widely into the matter than that, and get, if possible, statistics of land developed both municipal and by private enterprise year by year, if possible divided into districts. I think that probably such figures have been compiled either by some Government Department or by the Town Planning Institute, or some similar body, and should be greatly obliged if you could tell me the best source from which to seek such figures. I. S.

Lias Lime Mortar.

SIR,—Would you inform me how lias lime mortar can be distinguished with certainty from ordinary lime mortar in buildings which are over 60 years old, without resorting to chemical analysis, and what methods are adopted? DOUBTFUL.

Damp Floors.

SIR,—A house was built about three years ago, and has been occupied for the last two years. The year before occupation it often had fires lit and was used by workmen during meal hours. During the two years of occupation the hall (boarding on timber joists) has been covered with linoleum, the boarding not being treated in any way, the linoleum being laid loosely, not nailed, and a little away from the skirting boards. On a smell of dampness being detected the linoleum was taken up. The floor boards were found to be saturated, and the under side of the linoleum coated with damp substance. There is a good damp course, and the floor is ventilated by the usual air-bricks. There has not been any water applied to the linoleum for cleaning. Is the presence of dampness due to the use of linoleum—if so, can you suggest a remedy? ANON.

Waterproofing Walls.

SIR,—I have a house, the outside walls of which are covered with rough-cast. This, however, seems to absorb the heavy winter rains, making the inside walls damp. The builders treated the rough casting with a solution which they said would make the walls weatherproof, but as I still have my doubts about this, I thought of applying paint, which should make them quite proof against the inside dampness. Before doing so, however, it occurred to me that you might be able to recommend something to overcome this difficulty, as a considerable quantity of paint would no doubt be necessary. J. F. J.

ANSWERS.

Retention Moneys.

[ANSWER TO "TOLERANT," FEBRUARY 17.]

SIR,—If the R.I.B.A. Form of Contract is used, the architect is empowered to withhold the carrying out of any decorations or painting he may deem inadvisable to carry out in the new work. But this is expressly stated as not to affect the "completion certificate," which may exclude the above case.

CONTRACT.

Vibration in Hot Water System.

[ANSWER TO "L.H.S.," FEBRUARY 10.]

SIR,—Your correspondent should have the system examined by a competent authority. It would appear that the boiler is too big for the system or is consistently overfired, with the result of generating steam. This is a danger in itself and will contribute greatly to the wear and tear of the plant. CALOR.

Soundproofing Floors.

[ANSWER TO "H. H. H.," FEBRUARY 17.]

SIR,—There is on the market a soundproofing quilt in which grass fibres are held between layers of fabric. This is supplied in rolls, which can be laid over the joists and the boards applied on top. Another fabric similarly used has dried seaweed as the insulating material between layers of fabric.

HUSH.

Clause in Lease.

[ANSWER TO "QUERIST," FEBRUARY 3.]

SIR,—"Structural repairs" cover such items as door and window frames, which are an integral part of the structure, except in so far as such dilapidations may have arisen out of the neglect of the lessee to carry out the terms of the lease devolving upon her, viz., as by neglecting to renew paint at reasonable intervals. In other words, if the frames have rotted or broken as a result of wearing out despite careful maintenance, I should place the onus of renewal upon the lessors; if as a result of neglect in the foregoing way, or by unreasonably rough usage, then upon the lessee. The former contingency will be difficult to establish, and it would appear on the face of it that the lessors' contention is likely to stand. LEASE.

Clause in Lease: Responsibility for Pointing.

[ANSWER TO "O. N.," FEBRUARY 24.]

SIR,—The clause is seemingly contradictory in its terms, for the lessee undertakes "to restore and make good the outside stucco and brick work other than and except structural repairs to the main walls," whilst the lessors covenant with the tenant that they will maintain the "main . . . walls in substantial repair and condition."

In my opinion, pointing must, by its very nature, be a structural repair, as the cement (or lime) mortar is the material which binds the individual bricks together so as to form the homogeneous mass we call "brickwork." Without the characteristics of the mortar there would be no brickwork.

Therefore, when, owing to the effects of time and the elements, the outer surface of the mortar begins to decay and disintegrate and so loses its qualities, then its repair and renewal by the process of the removal of the defective parts and replacing with new in the form of "pointing," must be a structural repair, as its action is to preserve from collapse the whole mass of the brickwork forming the main walls.

ARTHUR H. DAVIS.

Damp Front Wall.

[ANSWERS TO "SUBSCRIBER," FEBRUARY 24.]

SIR,—Your correspondent should make sure that there is no fault in the roof or eaves, which may be introducing water into the top of the wall. If this is sound, or made sound, tile-hanging properly executed is a certain cure. Tile hanging is preferable to slate in appearance. It should be hung on battens plugged to the wall, and rustless nails (copper or composition) used for the purpose. The tiles should be lapped 1 in. over the window frames, and the ends pointed in cement, the frames being packed out flush with the wall if necessary. Angles should be made with special angle tiles. A 2 in. lap is sufficient for vertical tile hanging. FACE.

SIR,—The suggested methods of hanging tiles and slates over a damp and porous brick wall is not to be recommended. "Subscriber" should have this wall rendered in cement with an amount of damp-resisting preparation added. The damp having got well into the bad bricks, "Subscriber" should not expect a dry wall immediately, as it will take some time for all the accumulated damp to be dried out. R. H. W.

Frost in Cement Path.

[ANSWER TO "A. J. M.," FEBRUARY 24.]

SIR,—The path laid in clayey sand should be taken up entirely, as the presence of loam or clay in any quantity definitely destroys the setting properties of cement. If the portion executed with clean sand is otherwise sound, a thick screed of cement will doubtless put this matter right if the surface is well picked up for a key. GRANO.

"Architectural Qualification."

[ANSWER TO "L.R.I.B.A.," FEBRUARY 10.]

SIR,—F.N.A.A. is an abbreviation of "The National Association of Auctioneers, House Agents, Rating Surveyors and Valuers, Ltd." (by guarantee), with offices at 18, Gordon-square, W.C.1. The Association was started about 1924. Members were enrolled without examination, but membership is now obtainable ordinarily only by examination.

C. G. W.

OBITUARY

R. J. Williams, F.R.I.B.A.

We regret to record the death of Mr. Richard John Williams, F.R.I.B.A., at Kettering, Northants. Born in 1868, Mr. Williams spent his boyhood in Portsmouth, and after receiving education at a private school at Southsea, entered the office of Mr. A. H. Ford, A.M.I.C.E., of High-street, Portsmouth, in 1881. In 1888 he became assistant architect to Viscount Portman, working on his estates in Somerset, Dorset, and North Devon. Three years later he set off to the Midlands, where at Kettering he set up a practice of his own under the title of Messrs. R. J. Williams and Partners. He was largely responsible for the formation of the Northamptonshire Association of Architects, and was a member of the Council; and in 1929 he was the President of an enlarged association, which comprised Northants, Huntingdonshire and Bedfordshire. He was the Association's representative on the Royal Institute of British Architects and the Conference of Allied Societies. During the war he acted as Board of Trade Area Road Secretary for Northamptonshire. He became Fellow, R.I.B.A., in 1921.

John B. Lofting, F.S.I.

We regret to record the death of Mr. John B. Lofting, F.S.I., in his 76th year, in a London nursing home. He was in practice as a chartered quantity surveyor for over fifty years, and during that time was associated with many important works, including the Memorial Buildings, Clare College, and the University Library, Cambridge; Lady Margaret Hall and Pusey House, Oxford; the restoration of Barrington Court, Somerset; and St. Columba Church, Scarborough. He took an active part in his practice to within six months of his death. His practice is being carried on as John B. Lofting and Co., and at the same address, 44, Bedford-row, London, W.C.1.

THE BUILDING TRADE

MINOR PROBLEMS OF CONSTRUCTION AND REPAIR—IX

By A BUILDING SURVEYOR.

CONDENSATION TROUBLES.

As a result of the greater speed with which buildings are now erected and occupied, troubles arising out of condensation have become more numerous. In the circumstances these cannot be altogether avoided where the materials and the forms of construction are such as to necessitate the use of large quantities of water that must be dried out. Such troubles are not, however, entirely confined to new building work, nor to buildings erected with wetted materials, and consequently we cannot regard them as something that may be left alone with the certainty that time will completely cure them. In many cases time will modify them to the extent of making them tolerable, and in some cases to the extent of making them unnoticeable without search. Here, however, we have to deal with them as something to be avoided so far as possible, and corrected where necessary or desirable.

A rough description of the underlying causes of condensation may be of some service to the practical man when brought face to face with problems in the ordinary course of his business. Briefly, moisture in an invisible form occupies space in the air, and in this form is usually described as water vapour. Air is composed of atoms in constant motion, which keeps them apart, and the spaces between them can be occupied by vapour without its becoming visible or making the air feel damp. Heat increases what is termed the kinetic energy of these atoms and they are driven farther apart, thus making available more space for water vapour, with the result that warm air can carry more of it than cold air. Cold, on the contrary, reduces this energy, draws the atoms closer together, and, if sufficient room is not left for all the moisture vapour that was in the air prior to the reduction in temperature, some of it is, in effect, squeezed out. This natural process is necessary to the continuance of our water supplies and goes on everywhere, the air absorbing water and giving it back in the form of hail, snow, rain, and dew, the last of which may be described as resulting from condensation on the grand scale. Water is transformed into water vapour by evaporation. When it returns, either as rain on the outside of a window or condensation on the inside, much the same sort of thing is happening; it is being discharged from air that no longer has room for it because of a drop in temperature, though in the case of rain conditions are more complex.

The cause and effect of a drop in temperature may be local, and this has an important bearing on our present problem. When breathing, we give off quite a lot of water vapour, which, if we are in a room at normal temperature, is absorbed into the air without becoming visible. We may illustrate this by taking a small square of window glass and breathing on it. If the glass is cool, a film of vapour will immediately form on its surface; but if the glass is warmed up in front of the fire, no such film will appear. On a larger scale the same thing occurs in a closed railway carriage that is warm and apparently quite dry, but permits condensation to make its appearance quickly on the windows. On a cold or wet day, when the window glass is kept cold, the condensation forms very readily.

Before going on to draw practical conclusions from these natural facts it is necessary to have some regard to the amount of water vapour that can be carried by a given quantity of air at a given temperature. Thus, in 1,000 cubic feet of air (equal to the content of a room 10 ft. by 12 ft. 6 in. by 8 ft.) at 100 degrees Fahrenheit there would be space for 2.83 lbs. of water, whereas if the temperature fell to 60 degrees Fahrenheit there would be room for only .82 lbs. An ordinary room would rarely be so warm as to send up the register to 100 degrees Fahrenheit, but might well become so cold at night as to cause a fall to well below 60 degrees Fahrenheit. In order to provoke a discharge of moisture the fall in temperature need not be general, for as a rule it is a local reduction brought about by contact with cold surfaces that causes a fall in temperature and leads to the deposit of moisture. This has an important bearing on the subject, for while the humidity of the air may not be so high nor the temperature so low as to bring about a general discharge, a local discharge may, and frequently does, occur on cold surfaces. A further point to be noted is that it is not the smoothness but the coldness of the surface that causes this local discharge. On a rough surface the discharge may be just as great, but not so apparent as on a smooth one. Water vapour can condense on soft surfaces, but if absorption readily takes place it will not be so noticeable.

Under normal conditions the air is more ready to receive than to discharge moisture; that is to say, it is not, except where in contact with cold surfaces, at what is known as saturation point. Dew, for instance, does not fall from a height, but is extracted from a layer of air in close contact with the surface of the earth when its temperature has been lowered by radiation. Mists may form in several ways, but perhaps most commonly much after the same manner as dew. A mist may clear either by evaporation or partly by condensation, but mainly by evaporation; and even when condensation does take place evaporation will follow. In a similar way steam from a solitary kettle will disappear into the air of a room by evaporation, whereas with steam constantly discharged in considerable volume, as in a laundry, the air becomes saturated, can hold no more, and condensation takes place on comparatively warm surfaces. In a flue to a gas fire, condensation can and frequently does take place even though the exhausted products of combustion are discharged into the air at well above outside temperature. This is a fact well worth remembering, for in it lies the key to some damp problems that have sometime puzzled the practical builder.

To give a complete exposition of this part of the subject a good deal more would need to be said, but space forbids, and the student seeking a fuller and more scientific explanation must be referred to the text-books. From the practical point of view, the facts that emerge may be stated simply. In the first place, under normal conditions there is always some water in the air, but at the average temperature prevailing in an occupied building there is usually room for more. A new building constructed of wetted materials dries both inwardly and outwardly, and thus more moisture is offered, so to speak, to the air in a new building than in an old one. The capacity of the air to retain moisture in the form of water vapour is governed by its temperature at any given time, and is lessened by a fall in temperature. New buildings of the kind mentioned usually offer colder surfaces to the air than old buildings of similar construction. In other words, brick and plastered walls or concrete and tile floors that still contain moisture are colder than those which are dried out. And as the air in new buildings is thus likely to contain more moisture and be brought in contact with colder surfaces, the likelihood of condensation forming on these surfaces is increased.

The amount of condensation that will become apparent on any surface will, to some extent, be determined by the power of the material to absorb water. Thus an unpainted plaster wall will show less condensation than one that is painted, and a washable distemper more than an old-fashioned one made up with whitening not bound down other than by the contained size.

Materials that do not readily absorb and retain heat, such as glass and, from the point of view of retention, iron, offer, at night especially, and often during the day, cool surfaces likely to provoke local condensation, and as they do not absorb moisture it soon becomes apparent. In some circumstances they can be given a dressing that will bring about an improvement. A corrugated-iron roof exposed on the underside offers a surface on which condensation may readily take place, and in garages and similar buildings this may become a nuisance. Conditions may be much improved by painting the underside, and, while the paint is still "tacky," dashing on to it ground cork, such as is sometimes used for packing. Asbestos-cement roofing sheets are not so susceptible to condensation as iron, but under severe conditions are not immune. Manufacturers of gas-heating appliances prefer asbestic-cement compositions to sheet iron for flue pipes, because they are not so liable to condensation.

It has been urged that the use of iron instead of wooden casements has increased the number of cases of trouble from condensation, but though the conditions thus set up do slightly increase the area of cold surface, the difference is very small. On painted surfaces the absorption can be only very slight in any case. Generally speaking, papered walls, by permitting more absorption, are less likely to show condensation than painted walls, and ordinary plastering than harder plaster or cement coverings. Water repellants used internally, as on the surface of concrete floors, favour the appearance of condensation both by staying absorption when condensation is taking place and providing more water for evaporation after floors are washed but not dried off by other means.

Good ventilation minimises condensation, the frequent changing of the air rendering it unlikely under normal conditions to become so humid as to drop a portion of its load with a fall in temperature. This is of special importance where gas is used for lighting purposes, or in heating fittings not connected to flues.

The occurrence of condensation cannot in a building be altogether avoided, but it can be stayed from becoming a nuisance by giving attention to the points mentioned, and to the principles involved.

COMPETITION FOR DECORATIVE DESIGNS.

A COMPETITION is announced by the Silicate Paint Co. (Messrs. J. B. Orr and Co., Ltd.) for students, apprentices, operatives or masters of the painting and decorating trades, to take the form of decorative designs of any kind whatever on panels. The panels, when finished and mounted by the company, will measure 5 ft. 6 in. by 2 ft. 3 in., and are to be vertical, not horizontal. Cartridge paper in roll 6 ft. by 2 ft. 6 in. will be supplied to competitors on application, such roll to be grounded in Duresco by the company with any colour selected by the competitor, the design to be carried out on such ground with Duresco supplied by the company direct to the competitor. Five prizes, from £1 1s. to £6 6s., are offered, and the panels will be exhibited at the forthcoming Decorators' Exhibition at Bingley Hall, Birmingham, from September 10 to September 30. The judges are Messrs. L. Drinkwater, B. Phelps and J. G. E. Holloway. The finished panels must be delivered to the company at Charlton by August 1 at latest, and will become the property of the company. Entries close on June 1.

R.S.I. Congress, 1933.

The Right Hon. Lord Cozens-Hardy has accepted the office of president of the Royal Sanitary Institute Congress to be held in Blackpool in June.

INDUSTRIAL STATISTICS

In our annual review of the industrial statistics for the years 1929 and 1930, we felt compelled to ask the question, "Are we paying our way?" and in August, 1931, the nation received a very definite answer in the negative, and since October, 1931, strenuous efforts have been made, including drastic economies, to place the nation on a sounder footing. If the crisis had been localised to our own country the efforts made would have had by this time more apparent results, but unfortunately this was not the case, as the war and other causes have brought about a world-wide financial and industrial crisis. In reviewing the position, the question now to be asked is whether as compared with other countries we are holding our own or rather more than holding our own. In this article we deal only with our internal industrial statistics, but if for a moment we glance abroad, we think this question can be answered in the affirmative, as our credit is restored and there is an improvement in the visible trade balance of £121,895,000, the excess of imports over exports having fallen from £408,976,000 to £287,976,000, and if our actual exports have not increased yet they have not diminished to the degree experienced abroad.

Such drastic economies as we have had to exercise are arduous in themselves and bear heavily on individual interests, and criticism from many quarters was to be expected, but it appears to us that the one thing likely now to bring about an all-round improvement in our conditions is consistence in our policy and continuity in our purpose, and to secure this, mere objection is useless, and in itself deleterious, though suggestion may be useful, and in some cases actually profitable. Hopeful elements are to be found in our internal statistics in the re-establishment of our credit with cheaper money, and the fall in the cost of living despite the departure from the gold standard, but the most serious feature is the continuance of unemployment on such a large scale, though here also we compare advantageously with other industrial countries.

Employment and Unemployment.

In considering the figures contained in the *Labour Gazette* relating to employment and unemployment, it is necessary to state at the outset that the numbers of persons in either category have been adjusted for the effects of legislative and administrative changes. Towards the end of 1931 employment was improving, and in December, 1931, the number of workpeople in employment was 9,605,000; but by January, 1932, the number had fallen to 9,361,000. The year was one of fluctuations and the numbers of persons employed were affected by the dispute in the cotton industry, and the figures had fallen from 9,517,000 in March, to 9,209,000 in August (including those persons involved in trade disputes), which was the lowest figure recorded since 1923, when comparable figures are available. After further fluctuations, on December 19 the figures were 9,457,000, that is, 96,000 above the level of January 25, 1932, but 148,000 below the figure for December, 1931. The average for the year as a whole was the lowest average for the year since 1923, except for the year 1926, the year of the general stoppage, when the average was 290,000 lower than that for 1932.

It may be interesting to give the highest and lowest averages in that period, leaving out of account the year 1926. The figures are arrived at by deducting from the total estimated numbers insured the average numbers recorded as unemployed and the numbers directly involved in trade disputes, with an allowance of 3½ per cent. of the numbers insured in respect of those absent for illness and other forms of non-employment other than recognised holidays, and the highest average recorded is that for the year 1930, 9,797,000, and the lowest, leaving out 1926, is that for 1932, 9,352,000.

The average percentage of unemployed persons for the year 1932 was 22.1, as compared with 21.3 in 1931, the wholly unemployed being 17.6 per cent., as compared with 16.7, and the temporarily stopped 4.5 per cent., as compared with 4.6.

The number of persons (insured and uninsured) on the register on December 19, 1932, as unemployed was 2,795,795 (2,334,302 wholly unemployed and 461,493 temporarily stopped). Those wholly unemployed included persons normally in casual employment. It may be noted that it is stated in the *Labour Gazette* that the continuance of acute depression has the effect of lengthening the periods of unemployment experienced by individual workers.

With reference to the statistics of unemployment, it was pointed out by the Balfour Committee some years ago that the growth in population is an element to be taken into consideration, and from figures given it appeared that the employee population was increasing, roughly speaking, at the rate of about 100,000 a year, and that a million persons represented about 8½ per cent. in the unemployment figures. If we apply these tests to the period 1924-1932, for which alone statistics are available, it would appear that we are no longer absorbing the increased industrial population into industry. In 1924 the estimated number of persons insured between the ages of 16 and 65 was 9,526,000, and the unemployment percentage was 10.3. In 1932 the number was 9,352,000, and the percentage of unemployed 22.1. In that period of nine years the growth of population may be taken as about 900,000, and thus it would appear that the whole increase in industrial population has not been absorbed into industry, and about 173,000 of the employed population has, besides, dropped out. This is reflected in the percentage figures of unemployment by the difference between 10.3 in 1924 and 22.1 in 1932; the increased population represents at least 8½ per cent.

Rates of Wages.

It is unnecessary to recapitulate each year the numerous classes of persons not included in the statistics relating to changes in rates of wages, but it is sufficient to note that, in spite of the great depression ruling throughout the year, it was not a year marking any great decrease in the rates of wages; the net result of all the changes reported in the weekly rates of wages was a net weekly decrease of £248,250, as compared with £401,150 in 1931, the reductions made mainly affecting those in the textile, building, and transport industries, and in the public administration services.

Hours of Labour.

The changes in hours of labour were very small; 6,000 workpeople had an average increase of about 2¾ hours per week, and 3,600 an average reduction of about 2¾ hours.

Cost of Living.

Between January 1 and June 1, 1932, the cost-of-living index as regards the standard of living fell from 47 to 42 above pre-war level, and after touching 41 in August and September it rose in October to 43, but relapsed to 42 at the end of the year, a not unfavourable result, considering the departure from the gold standard coupled with a resort to tariffs. It may be noted that rent, including rates, remained stable at 54 until the last two months of the year, when the figure rose to 55, and this possibly may be the result of unemployment on the rates.

Trade Disputes.

As regards trade disputes, the year was a quiet one, for, although the loss in working days was 6,490,000 (as compared with 6,983,000 in the previous year), the time lost in disputes in the cotton industry amounted to nearly 90 per cent. of the total loss in working days. There were in all 384 disputes compared with 420 in the previous year, involving 378,000 as compared with 490,000

The Building Trade.

The statistics relating to the building trade are never very satisfactory in the *Labour Gazette*, as in some tables the industry is grouped with "Public Works, Contracting, etc." but we may give such particulars as we can under the headings we have dealt with above. As regards employment, the year is described as very slack throughout and the average percentage of unemployment was 29.2 as compared with 22.5 in 1931. Rates of wages in the building trade, public works, etc., showed a net decrease in weekly rates of wages of £48,460 as compared with £47,350, whilst in trade disputes the year compares favourably with its predecessor. The figures here again include contracting etc., but there were 29 disputes as compared with 57 in 1931; the number of workpeople involved was 3,000 as compared with 12,300, and the loss of working days 36,000 as compared with 145,000.

The number of insured workpeople in the building trade in July last is given as 856,910; the numbers unemployed in December 274,710, of which 11,548 were temporarily stopped, and the percentage of unemployment 32.1.

WORKING-CLASS HOUSES

Sir,—One reads with amazement the talk of building small houses and workmen's dwellings, but neither architects, reformers, new associations, nor the so-termed "building societies" try to tackle the problem properly. There is a great deal of flowery talk, and a condemnation of the speculative builder, and there it seems to end.

It was refreshing to read the criticism of the suggested small cottages, plans of which appeared in *The Builder* two weeks ago. Who on earth wants to live in such hovels? Certainly not the working man with a family. Whose brains conceive such buildings in which to house the people? There is not a decent-sized room, either living room or bedroom, in the house. What section of the community can "live" in such houses? What section of the speculative builders would build such rubbish? What group of financiers would put up money for such monstrosities? What surveyor would conscientiously declare that such houses are wanted and have a value?

Housing reformers, especially in London, do not seem to realise that it is not the tiniest roomed dove-cote house that working folk want. They demand rooms of sizes fit to live in, and a living room and a bedroom in any house should not be less than 12 ft. 6 in. by 15 ft.

In untold thousands of those "old-fashioned" pre-war type houses of the North, there is a really good living room—16 ft. by 12 ft. being very common. Now, does any sane architect imagine that folk will go voluntarily from a house of decent sized rooms—in spite of hosts of inconveniences compared with 1933 standards—into hovels with living room 15 ft. by 10 ft., less chimney breast, with two doors, nasty bulkhead stairs in living room, not one reasonable double bedroom, and the bath in the scullery, and pay a much higher rental?

One reads a lot about the houses provided by manufacturers of the last era. A great deal is written by young and misinformed writers, and by men and women who did not grow up with the situation, yet those dwellings compared with the standards of their day are far ahead of the proposed dwellings I am referring to now, with 1933 standards. To quote just one, there is the village of Saltaire, near Bradford, Yorkshire.

How many thousands of 1922-1932 once "pretty villas" will be derelict slums in 1960-70, and all because the value of craftsmanship is ignored, and no provision whatsoever made for any kind of maintenance repairs, painting, etc.? Securities in house property are shrinking visibly as there is no scheme for upkeep and repairs, and now we see the so-termed building societies desperately trying to find a way out. The building societies have missed their way and become trading concerns in percentages, rather than the old type "self-help building society." There is no practical scheme yet of building and advancing with the times. We are just

" muddling through "—building up a terrible housing debacle for the next generation.

It is quite time all this nonsensical talk stopped about small houses, small rabbit-hutch hovels, and practical men stepped in to show reformers and societies and associations and the Government that a housing scheme can be devised to provide houses for all sections of the working-class community, at fair rentals, without subsidies—and subsequently to provide ways and means, for the municipalities (guaranteeing the rentals) to have houses at their disposal for the very poor, at rentals of 4s. per week. Slum property would vanish automatically.

Good houses, having craftsmanship of the " good old days," can be erected to be let at 12s. 9d. per week, including £5 per year compulsory maintenance, and that rental after the first year can be reduced yearly and give to occupiers a freedom of movement, change of residence, from one district to another, or one town to another, under a rental-liquidation-transfer scheme, and provide for 10 per cent. possible " empties," pay a sound commercial interest to a founder's syndicate, pay 4½ per cent. interest per annum on a 60 years' fund, and enable the entire sums to be redeemed in the period of 60 years.

The community at large will finance itself for houses fit to live in, but the scheme requires to be carried out on a reasonably large scale.

JOHN A. CALVERT.

Finsbury Park.

[Other letters are held over.]

NEW BUILDINGS IN LONDON

Acton.—FACTORY.—A new factory is in the course of construction in Western-avenue, W.3. The builders are Messrs. H. and W. Kendall, Gunnersbury-avenue, Ealing, W.5. Messrs. J. C. FitzPatrick and Co., engineers, 31, King-street, Acton, W.3, are also carrying out building work.

Acton.—FLATS.—Messrs. W. Hearn and Chuter, 13, Heathfield-terrace, Chiswick, W.4, are the architects for flats which are to be erected in Fairlawn-park, W. No contract has yet been placed.

Barkingside.—HOTEL.—Messrs. Ind, Coope and Co., Ltd., Burton-on-Trent, have secured a site in Fencepiece-road, for a hotel. The plans have been prepared by Mr. J. W. Hammond, 40, High-street, Romford, and not as stated in our last issue.

Belvedere.—HALL.—A new parish hall and institute is to be built from plans prepared by Mr. C. E. Burgess, Market-place-chambers, High-street, Dartford, for the Church of St. Augustine. No contract has yet been placed.

Bermondsey.—CLINIC.—The B.C. has recommended proposals of the Public Health Committee with regard to the erection of a clinic on the site of Nos. 108, 109 and 110, Grange-road, and the solarium in Alscot-road, at £44,125, being approved, and the General Manager has been instructed to proceed with the work.

Bermondsey.—HOUSING.—The B.C. recommend that the sketch plans for the erection of blocks Nos. 1 and 3 on the Redriff Estate be approved, and the General Manager's estimates of £14,995 and £25,979 for the flats be approved. The Council also approved the sketch plans for the erection of blocks Nos. 1 and 2, Albion-yard, and the General Manager's estimate of £38,621 for the erection of the flats.

Croydon.—EXTENSIONS.—The contract for the first portion of the proposed extensions to the Croydon General Hospital, London-road, has been placed with Messrs. E. H. Smith (Croydon). Ltd., 48, Wellesley-road, Croydon. The plans have been prepared by Messrs. J. Berney and Son, 33, High-street, Croydon.

Croydon.—FACTORY.—Messrs. A. Bourjois et Cie., 4, Water-lane, E.C.4, have acquired a site on the Waddon Industrial Estate, Purley-way, for a new factory. Plans are now being prepared, but no contracts have been placed yet. The architects are Messrs. Fuller, Hall and Foulsham, 125, High Holborn, W.C.1.

Dagenham.—HOTEL.—Mr. E. Meredith, F.R.I.B.A., 7, Goodmayes-road, Goodmayes, has prepared plans for Messrs. Day's Garage, New-road, Dagenham. The scheme is for a hotel-restaurant. No building contract has yet been placed.

Ealing.—FLATS.—Messrs. Hoare and Wheeler, 15, Portman-street, W.1, are the architects for a block of flats in Pope's-lane, for Messrs. Cowan and Green.

Ealing.—HALL.—The Salvation Army, Queen Victoria-street, E.C.4, have under consideration the erection of a permanent hall at the corner of Coston's-lane and Greenford-road. The society's architect is Mr. Oswald Archer.

East Ham.—FACTORY.—Plans have been prepared, and tenders are about to be considered, for a factory on the Barking by-pass road. The architects are Messrs. C. J. Dawson, Son and Allardyce, Clock House-chambers, Barking.

Euston-road.—PREMISES.—Shop premises are proposed on a vacant site in Euston-road, N.W.1. Messrs. Rutley, Vine and Gurney, estate agents, 97, Tottenham Court-road, W.1, are connected with the scheme.

Finchley.—HALL.—The North Finchley Baptist Church have decided to build a new church hall on the site of the existing one, at a cost of about £2,500. The arrangements are in the hands of the minister, the Rev. E. Murray Page, 41, Torrington Park, N.12.

Finchley-road.—SHOPS AND FLATS.—A block of 32 flats and eight shops, with garages behind, to cost £40,000, has been planned for a site in Finchley-road, near the Hampstead Garden Suburb. Mr. F. C. Mitchell, L.R.I.B.A., 80, George-street, Portman-square, W.1, is the architect. A contract has been placed.

Holborn.—BUILDING.—The General Purposes Committee have approved the proposal of Messrs. Fuller, Hall and Foulsham to erect buildings upon site of 5/11, Onslow-street, to replace building destroyed by fire.

Ilford.—FACTORY.—The Ilford Electrical Co. are to carry out extensions to their factory, etc., in Bogies-avenue, High-road. The building work will be by direct labour, whilst the steelwork will be by Messrs. Redpath, Brown and Co., Ltd. The architect is Mr. T. Anders, Beehive Estate office, Eastern-avenue, Ilford.

Isleworth.—HALL.—The Forty-Five Churches Fund, 7, Bayley-street, W.C.1, have received an anonymous donation towards the erection of a church hall at Isleworth. An architect has not yet been appointed to prepare the necessary plans.

Kensington.—ADDITIONS.—H.M.O.W. have accepted the estimate of Mr. A. Bedford, 19, Melbourne-parade, Palmers Green, N.13, for alterations and additions to Kensington-gardens depot.

Mark-lane.—REBUILDING.—No. 72 is to be rebuilt to plans prepared by Messrs. Richardson and Gill, FF.R.I.B.A., 41, Russell-square, W.C.1. The building contract has been placed with Messrs. W. H. Lorden and Son, Ltd., 107, Trinity-road, Upper Tooting, S.W.17.

Merton.—SCHOOL.—The Surrey E.C. are to apply to the Board of Education for new secondary school at Bushey Mead, Merton.

Minories.—PREMISES.—The City Corporation received application submitted by the L.C.C. from Mr. D. Warry, architect, 25, Bedford-row, W.C.1, for consent to the erection of a building upon the site of 3 and 5, Vine-street, Minories, E.C. The site has been acquired by Mr. F. J. Coxhead, builder, Bulwer-road, Leytonstone, for a block of modern offices, etc.

Neasden.—SHOPS.—The contract for the block of shops and flats to be erected in Neasden-lane, N.W.10, has been let to Messrs. E. and J. Cotton, Ltd., of 74, High-road, Chiswick, London, W.4. The architects are Messrs. Marshall and Tweedy, FF.R.I.B.A., of 4, Cavendish-place, Cavendish-square, W.1.

Northwood.—STATION.—Plans of the new station at Joel-street have been submitted by the Metropolitan Railway Company and approved by the Council. Mr. C. W. Clark, Baker-street Station, is the architect to the Metropolitan Railway.

Paddington.—TENEMENTS.—The B.C. have accepted the tender of Messrs. C. Tavener and Son, 112, Finchley-road, N.W.3, amounting to £3,348, for the erection of a block of eight tenements and contingent works on the sites of 61, 63 and 65, Brindley-street, W.2.

Perivale.—FACTORY.—Plans have been prepared by Mr. J. Batty, A.R.I.B.A., 142, Minories, E.C.3, for a factory in Wadsworth-road, W., for Mr. J. M. Comuinos, 61, Lant-street, Southwark, S.E.1. Builders are Messrs. W. J. Dickens, 19, The Broadway, Ealing, W.5. The steelwork is to be carried out by Messrs. Dorman, Long and Co., Ltd.

Richmond.—ESTATE.—Plans have been prepared for the layout, including roads and sewers, of the Richmond Bridge estate, preparatory to its development for residential purposes. No contracts have been placed yet. The architect is Mr. R. A. Churchward, 12, Victoria-street, S.W.1.

South Mimms.—SCHOOL.—The Middlesex C.C. has recommended the estimate of Messrs. J. Laing and Son, Ltd., of Mill Hill, N.W., at £8,206, for the erection of a school in Mutton-lane. The plans are by the County Architect, Mr. W. T. Curtis, F.R.I.B.A., 10, Great George-street, S.W.1.

Stepney.—FLATS.—The Lincoln-street Housing Co., Ltd., 127, Middlesex-street, E.1, has been formed to erect a block of 34 flats in Lincoln-street, E. The contract has been placed with Messrs. Higgs and Hill, Ltd., Crown Works, South Lambeth-road, S.W.8. The plans have been prepared by Messrs. Joseph, 2, Paul's Bakehouse-court, Godliman-street, E.C.4.

Streatham.—SHOPS.—For the erection of a further large block of shops and flats on the site at the junction of Streatham High-road and Mount Ephraim-road, S.W., plans have been prepared by Messrs. Allan Phillips and Co., 11, Maddox-street, W.1. The building contract has been placed with Messrs. Bridge and Co., Ltd., 15, Brighton-road, Croydon.

St. John's Wood.—FLATS.—The site of Nos. 23-25, Grove End-road, N.W.6, is to be used for block of high-class flats, etc. No contracts have been placed, but plans have been prepared by Mr. Robert Atkinson, F.R.I.B.A., 126, Wigmore-street, W.1.

Thornton Heath.—REBUILDING.—Messrs Courage and Co., Ltd., brewers, Horselydown, S.E.1, are to have their licensed premises, " Horse Shoe " public-house, London-road, rebuilt. Mr. F. M. Kirby, F.R.I.B.A., is the brewers' own architect.

Tolworth.—CHURCH.—Rev. E. J. Redding, 114, Maple-road, Surbiton, proposes to build a new Roman Catholic church, to seat about 600 persons, a parish hall, schools to accommodate 400 children, and a presbytery, in Ewell-road. No contracts have been placed yet. The plans have been prepared by Messrs. Mitchell and Bridgwater, A.A.R.I.B.A., 17, Hanover-square, W.1.

Twickenham.—SHOPS.—Plans have been prepared by Messrs. Bierrum and Partners, 92, Victoria-street, S.W.1, on behalf of Mr. A. B. Davis, for 18 lock-up shops, with 22 flats above, in Heath-road. No contracts have been placed yet.

West Wickham.—DEPOT.—The Express Dairy Co., Ltd., Tavistock-place, W.C.1, are to build a new depôt and shop, for which plans have been prepared by the architect, Mr. S. N. Smallwood. The contract has been placed with Messrs. Commercial Structures, Ltd., 61, City-road, E.C.1.

Woolwich.—SCHOOL.—The L.C.C. recommend £8,700, submitted by the Finance Committee, in respect of the erection of an elementary school on the Middle Park estate.

York-road.—EXTENSION.—The Commercial Structures, Ltd., 61, City-road, E.C.1, have secured the contract for extensions to the Poppy Factory for the British Legion. The architect is Major D. Wood, F.R.I.B.A., 35, Craven-street, Strand, W.C.2.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st FEBRUARY, 1933.

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.]

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Aberdare	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Accrington	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Aldershot	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Alfreton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Alnwick	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Altrincham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Ashford (Kent)	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Ashington	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Ashton-under-Lyne	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Aylsham	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Banbury	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Barnsley	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Barnstaple	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Barrow-in-Furness	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Barry	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Basingstoke	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Bath	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Bedford	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Berwick	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bexhill	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Birkenhead	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	1/2½
Birmingham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bishop Auckland	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Blackburn	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Blackpool	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bognor Regis	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Bolton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bournemouth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Bradford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bradford-on-Avon	1/2	1/2	1/2	1/2	1/2	1/2	1/1	10½
Braintree	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Brentwood	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bridgwater	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Bridlington	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Brighton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Bristol	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bromsgrove	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bromyard	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Bungay	1/1	1/1	1/1	1/1	1/1	1/1	1/1	9½
Burnley	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Burton-on-Trent	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bury	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bury St. Edmunds	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Buxton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Cambridge	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Canterbury	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Cardiff	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Carlisle	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Chatham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Chelmsford	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Cheltenham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Chester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Chesterfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Chorley	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Cirencester	1/2½	1/2½	1/2½	1/2½	1/2½	1/1½	1/1½	11
Clacton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Colchester	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Coventry	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Cranbrook	1/1	1/1	1/1	1/1	1/1	1/1	1/1	9½
Crewe	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Cromer	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Darlington	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Deal	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Denbigh	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Derby	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Devizes	1/2	1/2	1/2	1/2	1/2	1/2	1/1	10½
Dewsbury	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Doncaster	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Dorchester	1/2½	1/2½	1/2½	1/2½	1/2½	1/1½	1/1½	11
Dorking	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Dovercourt	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Driffield	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Droitwich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Dudley	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Durham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Eastbourne	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
E.Glam. (Mon.Val.)	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Ely	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Exeter	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Exmouth	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Fakenham	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Felixstowe	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Folkestone	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Frome	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/1½	11
Glossop	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Gloucester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Godalming	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Goole	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Gosport	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Grantham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Gr. Yarmouth	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Grimsby	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Guildford	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Halifax	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Harpenden	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Harrogate	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hartlepools	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Harwich	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Hastings	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Hatfield	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Hednesford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hereford	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Herne Bay	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Hertford	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Hitchin	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Hoddesdon	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Holt	1/1	1/1	1/1	1/1	1/1	1/1	1/1	9½
Huddersfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hull	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hunstanton	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Huntington	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Isle of Wight	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Ipswich	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Keighley	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Kettering	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Kidderminster	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
King's Lynn	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Lancaster	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½

	Masons.	Bricklayers.	Carpenters Joiners	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Leamington	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Leeds	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Leicester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Leighton Buzzard	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Lichfield	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Lincoln	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Littlehampton	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Liverpool	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	1/2½
Llandudno	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Llanelly	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
London—								
12 m. radius	1/7	1/7	1/7	*	1/7	1/7	1/6	1/2½
12-15 m. radius	1/6½	1/6½	1/6½	*	1/6½	1/6½	1/5½	1/2
Loughborough	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Lowestoft	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Luton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Macclesfield	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Maidstone	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Malvern	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Manchester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Mansfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Margate	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
MarketHarborough	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Matlock	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Melton Constable	1/1	1/1	1/1	1/1	1/1	1/1	1/1	9½
Melton Mowbray	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Merthyr Tydfil	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1½
Middlesbrough	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/0½
Newark	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/1½
Newbury	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Newcastle-on-Tyne	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Newcastle-u.-Lyme	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
New Forest	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Newmarket	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Newport, Mon.	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Northampton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Norwich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Nottingham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Nuneaton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Oakham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Oldham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Oxford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Paignton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Peterborough	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Plymouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Pontypridd	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1½
Portsmouth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Preston	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Ramsgate	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Reading	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Redcar	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Redditch	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Reigate	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Retford	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Ripon	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Rochdale	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Rochester	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Rugby	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Saffron Walden	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
St. Albans	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
St. Helens	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Sawbridgeworth	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Saxmundham	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Scarborough	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Sevenoaks	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Sheffield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Shrewsbury	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Sittingbourne	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Southampton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Southend-on-Sea	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Southport	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
South Shields	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Stevenage	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Stockport	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Stockton-on-Tees	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Stoke-on Trent	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Stourbridge	1/5	1/5	1/4½	1/5	1/4½	1/4½	1/4½	1/0½
Stourport	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Stowmarket	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Stratford-on-Avon	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Stroud	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Sunderland	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Swaffham	1/1	1/1	1/1	1/1	1/1	1/1	1/1	9½
Swansea	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Swindon	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Tamworth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Taunton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Thetford	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Torquay	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Totnes	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Trowbridge	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/1½	11
Tunbridge Wells	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Uttoxeter	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Wakefield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Walsall	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Walsden	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Warminster	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Warrington	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Warwick	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wells (Norfolk)	1/1	1/1	1/1	1/1	1/1	1/1	1/1	9½
Welwyn Gar. City	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
West Bromwich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/0½
Weston-super-Mare	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Weymouth	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Whitby	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/1½
Wigan	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Winchester	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Windsor	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Wisbech	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Wolverhampton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Woodbridge	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Worcester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Worksop	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Worthing	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Wrexham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wycombe	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Wymondham	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
York	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½

* The rate recognised by the National Association of Operative Plasterers as and from 1st February, 1933, is 1/7½ per hour.

For Building Trade wages in Scotland, see page 397.

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issue. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender, that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

MARCH 6.

***Oldham.**—Houses.—Belgrave-rd. housing estate. Chairman of the Housing Committee, c/o Borough Engineer, Town Hall. Dep. £2 2s.

MARCH 8.

Antrim.—Convenience.—In basement of court-house, Market-sq., for R.D.C. J. L. Clark, Clerk of Council.

Bolton.—Bungalows.—12 bungalows on Moorfield housing estate, for Corporation. Housing Director, Westminster Bank-chambers, Old Hall-st. North, Bolton. Dep. £2 2s.

Brighton.—Houses.—On the Whitehawk site, for Corporation. Town Clerk, Town Hall. Dep. £2 2s.

Glasgow.—Fittings.—Wood fittings, etc., required for new science block in extension to High School of Glasgow, for Corporation. D. Stenhouse, T.C. Dep. £2 2s.

Grays.—Installation Work.—Installation work in connection with Council's assisted wiring scheme, for U.D.C. Electrical Engineer, Electricity Showroom, Maidstone-rd. Dep. £1.

Howth.—Sewage.—Sewage and water extensions and new roadway for 24 new cottages, for U.D.C F. Higginbotham, S., 3, Clare-st., Dublin. Dep. £2.

Llandovery.—Convenience.—Public convenience at Llandovery, for T.C. J. O. Parry, Borough Architect. Dep. £1 1s.

Petersfield.—Cottages.—Buriton 4, Eastmeon 8, Froxfield 6, and Hawksley 6, for R.D.C. D. A. Thomas, S., 14, King George-av. Dep. £2 2s.

Runcorn.—School.—New primary school for 150 scholars, for Cheshire C.C. F. Anstead Browne, F.R.I.B.A., County Architect, The Castle, Chester. Dep. £2 2s.

South Molton.—Houses.—2, at Rackmead, Chittlehampton, for R.D.C. C. N. B. Willey, Joint Clerk to Council, 7, East-st.

***Swansea.**—Additions.—Additional buildings and alterations, etc., at High School for Girls, for E.C. Borough Architect, 3, Prospect-pl. Dep. £4.

MARCH 9.

Barnstaple.—Conveniences.—Public conveniences on Parade-rd. at Woolacombe, for R.D.C. H. Hargreaves, S., The Red House, Castle-st. Dep. £1 1s.

Birmingham.—Building.—Construction of part of power house and annexes, and superstructure of pump house at Coleshill Works, for Birmingham Tame and Rea District Drainage Board. H. C. Whitehead, Engineer to Board, Engineer's Office, Rookery Park, Erdington, Birmingham.

Blackpool.—Demolition.—Cottage and out-buildings at corner of Warbreck Hill-rd. and Devonshire-rd., for Corporation. F. Wood, B.E.

Cardiff.—Extensions.—New observation block, nurses' home, extension of isolation block, and contingent works at Sanatorium, for T.C. City E. Dep. £2 2s.

Devizes.—Cottages.—At Alkcannings and Chirton, for R.D.C. Clerk, Maryport-chambers.

Glasgow.—Houses.—24 houses at Whitelaw-st. extension, for T.C. D. Stenhouse, T.C.

Hartley Wintney.—Houses.—Odiham 20, Phœnix Green, Hartley Wintney 12, for R.D.C. A. J. R. Watts, Building S. Dep. £2.

Ireland.—Building.—Alterations to existing buildings at Custume Barracks, Athlone; national school at Ahascragh, Co. Galway; national school at Tomhaggard, Co. Wexford; national school at Moneygashel, Co. Cavan; and national school at Roshin, Co. Donegal, for Commissioners of Public Works. T. Cassedy, secretary, Office of Public Works, Dublin. Dep. £1 each.

South Hayling.—Additions and Alterations.—At Junior Council school. Clerk, The Castle, Winchester. Dep. £1 1s.

MARCH 10.

Askern.—School.—New Moss-rd. infants' school, for West Riding E.C. Education Officer, County Hall, Wakefield.

Black Heath (Staffs).—Houses.—For Rowley Regis U.D.C. Clerk, Council House, Old Hill, Staffs. Dep. £2 2s.

Norham and Islandshires.—Housing.—Block of two bungalows, Ancroft, Berwick-on-Tweed, for R.D.C. Gray and Paterson, housing architects, 2, Ivy-place, Berwick-on-Tweed.

Roxburgh.—Housing.—One double cottage block of four-apartment houses at Newcastleton and at Appletreehall, near Hawick; and one block of four-apartment flatted houses at Newtown St. Boswells, for C.C. G. J. Sherriff, county clerk, Newtown St. Boswells.

***Solihull.**—Courts.—County Architect, Shire Hall, Warwick. Dep. £2 2s.

Stroud.—Garage.—At Head Post Office, for the Commissioners. H.M.O.W., Room 65D, Third Floor, London, S.W.1. Dep. £1 1s.

***Tetbury.**—Houses.—5 brick and roughcast houses, complete with necessary services, at Leighterton, for R.D.C. G. Hearsey, S., 20, New Church-st.

Tilehurst (Reading).—Telephone Exchange.—For the Commissioners. H.M.O.W., Room 65D, Third Floor, London, S.W.1. Dep. £1.

MARCH 11.

***Dagenham.**—Houses.—132 on No. 3 section of Central Park housing estate, for U.D.C. T. P. Francis, E. and S. Dep. £2 2s.

Evesham.—Houses.—Broadway, 22 houses, and Cow Honeybourne, 8 houses, for R.D.C. R. J. Atkinson, architect and surveyor, 64, Port-st. Dep. £2.

MARCH 13.

Birkenhead.—Additions.—To kitchen block at Tranmere Institution, Church-rd., for Corporation P.A.C. R. W. Johnston, B.E. and S. Dep. £1 1s.

Brighouse.—Building.—Building for aged men in Lane Head recreation ground, Halifax, for T.C B.E.

Feltham.—Dwellings.—74, at Faggs-rd., Bedfont, for U.D.C. John P. Blake, A.R.I.B.A., Bank House, High-st., Hounslow. Dep. £2 2s.

***Leytonstone, E.11.**—Shops, etc.—Town Clerk, Town Hall, Leyton, E.10. Dep. £5 (Treasury notes).

Plymouth.—Installation.—Of new domestic hot-water supply at Stonehouse Institution, for T.C. J. Wibberley, City Engineer and Architect, Sunbidgs.

Stoke-on-Trent.—Wards.—Extensions to casual wards at London-rd. institution, near Newcastle, for T.C. W. Pendleton, architect, Union Offices, High-st.

Wellington (Salop).—Houses.—30 semi-detached non-parlour type, for R.D.C. J. H. T. Hickman, 1, Market-st. Dep. £2 2s.

MARCH 14.

Bunderan.—Housing.—12 dwelling-houses, for U.D.C. W. J. Doherty, architect, 12, Castle-st., Derry.

Chingford.—School.—Junior and Infants' school, for Essex C.C. County Architect, County Hall, Chelmsford. Dep. £2 2s. (to the County Accountant).

Nottingham.—Office.—Builders' work in connection with new weighbridge and office, St. Peter's-st., Radford, for T.C. T. Wallis Gordon, City E. and S. Dep. £1.

Nottingham.—Heating.—Engineering work in connection with heating, hot and cold water supplies, etc., for various new blocks proposed at Aston Hall, Shardlow, near Derby, for T.C. T. Wallis Gordon, City E. Dep. £3.

Tralee.—Houses.—125 houses, for U.D.C. O. G. Trough, Town Surveyor. Dep. £2 2s.

***Walton-on-the-Hill.**—Cottages.—For the Reigate R.D.C. Clerk, Council Offices, London-rd., Reigate. Dep. £2 2s.

MARCH 15.

Blackpool.—Buildings.—At new highways depot, adjoining Bispham Station, for Corporation. B.E Dep. £2.

Bristol.—Building.—Building modifications to Temple Back Works, for T.C. A. J. Newman, chief engineer and general manager, Electricity Offices, Colston-av. Dep. £2 2s.

Hornchurch.—Fencing.—Provision of galvanised wire fencing to 6 tennis courts, for U.D.C. F. Alderson, S.

MARCH 16.

Bude.—Convenience.—Public convenience and other wirks on site adjoining Old Sand-rd., Strand, Bude, for Stratton and Bude U.D.C. F. J. Worden, S., Belle Vue-av.

Falmouth.—Alterations.—Also additions to 3, New-st., for Falmouth Parochial Church Council. H. H. Hoare, 57, Church-st.

MARCH 18.

Belford.—Reconstruction.—Of British Legion Club, Great North-rd., for Northumberland C.C. A. Cheyne, C.S., Newcastle-upon-Tyne. Dep. £5 5s.

MARCH 20.

Oldham.—Building.—Filter house, power and chemical house and other works in connection therewith to be erected at Readycon Dean, Denshaw, near Oldham, for C.B. J. J. Williams, T.C. Dep. £1.

Port Talbot.—Houses.—74 houses at Aberavon, 50 at Margam-rd., Port Talbot, 32 at Cwmavon, roads and sewers in connection for all schemes, for T.C. Moses Thomas, T.C. Dep. £5 5s.

South Godstone.—Houses.—For Godstone R.D.C. Clerk, Council Offices, Oxted. Dep. £2 2s.

MARCH 21.

Dublin.—Cottages.—Goatstown, 13; Shankill, 64; Farranboley, 34; Churchtown, 2; Glenamuck North, 2, for Board of Public Health. T. B. Byrne, engineer to the Board, 15, Parnell-sq., Dublin. Dep. £1 1s.

Lewes.—Sanitary Conveniences and Lodge.—For T.C. T.C. Dep. £2 2s.

MARCH 23.

***Ilford.**—School.—Proposed County High School for Boys. County Architect, County Hall, Chelmsford. Dep. £2 2s. (County Accountant).

MARCH 25.

Aberystwyth.—Houses.—18 non-parlour for two housing schemes, namely, Caeffynon and Lime Kiln sites, for T.C. Llewelyn Jones, B.S. Dep. £2 2s.

Warrington.—Houses.—21 non-parlour type in Burtonwood and 13 non-parlour type in Poulton-with-Fearnhead, for R.D.C. John Berry, of Fairclough, Berry & Co., Housing Surveyor, Church-st., Leigh. Dep. £1 1s.

MARCH 27.

***Surbiton.**—Open-air Swimming Bath.—For the U.D.C. Clerk, Council Offices, 17, Ewell-rd. Deposit £3 3s.

MARCH 28.

***Watford North.**—School.—At Leggatt's-way, for the Herts C.C. Clerk, Education Office, Hertford. Dep. £2 2s.

Wellington.—Wiring.—Wiring and lighting fittings, including 14,000 ft. of galvanised conduit for the Waitaki Power Scheme, Section 26B, for New Zealand Public Works Department. (Ref. G.X. 12184.)

NO DATE.

Ainwick.—Painting.—External woodwork and railings for 36 houses in York-cres. and 58 in St. George's-cres., for U.D.C. G. Beaty, Town Surveyor. Dep. £1 1s.

***Chelsea, S.W.3.**—Alterations.—To shop premises. Timothy Whites (1928), Ltd., Construction Dept., 30, Chandos-st., Portsmouth

Musselburgh.—Housing.—One three-story tenement of 6 three-apartment houses on Pinkie-rd. site, for T.C. John Logan, B.S. Dep. £1 1s.

Smithy Bridge.—Wiring.—Electrical wiring of Isolation Hospital at Bleaked Hill, Smithy Bridge, for Littleborough, Milnrow and Wardle Hospital Committee. G. F. Wild, clerk to Committee, Littleborough. Dep. £1.

Wisbech.—Buildings.—New farm buildings at Grange Farm, Inkerson, St. Edmunds. J. Farrow, Bowthorpe Hall, Wisbech.

MATERIALS, etc.

MARCH 8.

Aylesbury.—Highway Materials.—For T.C. Wm. H. Taylor, B.E. and S.

Crompton.—Road Materials.—For U.D.C. F. T. Jones, E. and S.

Salford.—Lime.—For Corporation. City E.

MARCH 9.

Tanfield.—Road Materials.—For U.D.C. J. R. Heslop, S.

MARCH 10.

Ilkley.—Highway Materials, etc.—For U.D.C. Surveyor and Water Engineer.

Malling.—Road Materials, etc.—For R.D.C. J. W Pell, Acting Highway Surveyor.

Minehead.—Granite Chippings, etc.—For U.D.C. A. D. Barron, E. & S.

Padiham.—Highway Materials.—For U.D.C. H. Russell, E. & S.

Port Talbot.—Pipes, etc.—For T.C. B.S.

Ramsgate.—Building Materials.—For T.C. H. G. Curtis, T.C.

MARCH 11.

Cairo.—Stone, etc.—For Director-General, Tanzim Department, Cairo.—Inspecting Engineer to Egyptian Government, 41, Tothill-st., London, S.W.1.

Burnley.—Highway Materials.—For C.B. B.E. and S.

Enfield.—Highway Materials.—For U.D.C. E. & S. "Percy House," 7, Little Park-gardens.

Fleetwood.—Pipes, etc.—For U.D.C. E. & S.

Gosforth.—Cement.—For U.D.C.—C. Wyld, E. and S.

Hoylake and West Kirby.—Highway Materials.—For U.D.C. W. H. Maitland, E. & S.

Isle of Axholme.—Road Materials.—For R.D.C. Mr. J. T. Battye, Epworth.

Looe.—Granite Metalling, etc.—For U.D.C. E. St. Leger Whitford, E. and S.

Marple.—Granite Macadam, etc.—For U.D.C. D. J. Diver, S.

Newbury.—Highway Materials.—For T.C. B.S.

Ossett.—Highway Materials.—For T.C. B.S.

Peterborough.—Cement, etc.—For T.C. W. H. A. Court, City E. & S.

Sevenoaks.—Granite, etc.—For U.D.C. S.

MARCH 13.

Bebington and Bromborough.—Highway Materials.—For U.D.C. L. Birch, E. & S.

Bury.—Highway Materials.—For Corporation. J. Chadwick, B.E. & S.

Ebbw Vale.—Tarmacadam, etc.—For U.D.C. P I. Davies, S.

Faversham.—Granite Chippings.—For R.D.C. J G. Chittenden, S.

Horwich.—Highway Materials.—For U.D.C. T. Green, S.

Huyton-with-Roby.—Highway Materials.—For U.D.C. A. W. Thomas, E. and S.

Leek.—Highway Materials.—For U.D.C. W. E. Beacham, E. & S.

Litherland.—Highway Materials.—For U.D.C. G. Ponsford, E. & S.

West Sussex.—Roadstone, etc.—For C.C. H. W. Bowen, C.S., Southgate House, Chichester.

MARCH 14.

Turton.—Sanitary Tubes, etc.—For U.D.C. V. W. Laithwaite, S.

MARCH 15.

Batley.—Road Materials.—For T.C. B.E., Brunswick-st.

Darlington.—Highway Materials.—For C.B. B.S

MARCH 16.

Blean.—Road Materials.—For R.D.C. F. A. Ward, S.

Llanelly.—Bricks, etc.—For R.D.C. A. Watkins, clerk.

Loughborough.—Highway Materials.—For T.C. W. Granger, B.S.

MARCH 18.

Chatham.—Road Materials.—For T.C. R. L. Honey, B.E. & S.

MARCH 20.

Southport.—Pipes.—738 tons of 18 in. dia. cast-iron pipes and specials, for Water Board. C. Burton Ede, E., 14, Portland-st., Southport.

MARCH 22.

Rugby.—Stone, etc.—For T.C. W. H. Spicer, B.E. & S.

Waterloo-with-Seaforth.—Highway Materials.—For U.D.C. J. R. Fothergill, E. & S.

ENGINEERING, IRON AND STEEL.

MARCH 8.

Bredbury and Romiley.—Road.—Road diversion at Bunker's Hill on Hazel Grove-Romiley road, for Cheshire C.C. G. E. Ashforth, C.S., The Castle, Chester. Dep. £5 5s.

MARCH 10.

Castlederg.—Sewerage.—Also sewage disposal for the town of Castlederg, and incidental works, for R.D.C R. A. Scott, clerk.

MARCH 11.

Chapel-en-le-Frith.—Water Supply.—Providing, laying and jointing of about 350 lin. yds. of 3-in. dia. cast-iron mains, together with cutting of existing main and fixing of additional fittings thereon, and other work incidental thereto, at Edale, for R.D.C. Brady & Partington, engineers, Market-st.

Limerick.—Reconstruction.—In reinforced concrete of Abbeyfeale bridge, for C.C. T. F. Ryan, County Surveyor, Limerick. Dep. £5 5s.

MARCH 13.

Plymouth.—Groynes.—Two groynes, about 36 ft. and 15 ft. in length respectively, terraces, walks, and incidental works in connection with extensions at Tinside bathing place, for T.C. City E.

MARCH 14.

Bombay.—Steelwork.—9 spans of 105 ft. for Sindh Bridge, for Great India Peninsula Railway, Bombay. Director-General, India Store Department, Belvedere-rd., Lambeth. London, S.E.1. Charge 5s.

London.—Steelwork.—For power-station extensions, for Fulham B.C. Preece, Cardew and Rider, 8 and 10, Queen Anne's-gate, Westminster, S.W.1. Dep. £10 10s.

Royston.—Bridge.—Works required in connection with construction of new mechanically operated lift bridge, together with necessary reconstruction and widening of approaches, to carry Barugh Green and Featherstone County-rd. over Barnsley Canal, for West Riding C.C. West Riding Surveyor, County Hall, Wakefield. Dep. £1.

MARCH 15.

Friern Barnet.—Conversion.—Converting and enlarging three existing 110-ft. diameter filter beds and other works at the Council's sewage disposal works, Cromwell-rd., N.10, for U.D.C. J. Montague Gameson, E. and S. Dep. £2 2s.

MARCH 16.

Brighouse. — Repairs. — To Brighouse bridge, which carries Bradford and Huddersfield county rd. over River Calder, for West Riding C.C. West Riding Surveyor, County Hall, Wakefield. Dep. £1.

MARCH 20.

Heston and Isleworth.—Tanks.—Storm-water tanks, of total approximate capacity of 20 million gallons, which will form part of proposed Mogden purification works, for Middlesex C.C. Dodd & Watson, engineers, 3, Central-bldgs., Westminster, S.W.1. Dep. £5 5s.

MARCH 22.

Dursley.—Water Supply.—Intake works, pump house, and about 5 miles of 5, 4 and 3-in. mains, a covered service reservoir and other works at Dursley and Cam, for R.D.C. A. P. I. Cotterell & Son, chartered civil engineers, 54, Victoria-st., Westminster, S.W.1. Dep. £2 2s.

ROAD, SEWERAGE AND WATER WORKS.

MARCH 8.

Cannock.—Sewerage.—550 yds. of 6-in. and 9-in. dia. stoneware and cast-iron pipes and 8 manholes in the Cannock-Wolverhampton-rd., Essington, for R.D.C. Lt.-Col. H. M. Whitehead, E., Penkridge, Stafford.

MARCH 9.

Larne.—Mains.—1,840 lin. yds. of 4-in. water pipe and 870 lin. yds. of 3-in. water pipe, with necessary storage tank, valves, fountains, hydrants, etc., in connection with drains water supply, for R.D.C. S. Robinson, E., Victoria-st.

Leeds.—Paving.—Kerbing, tar paving footpaths and carriageways in Barthorpe-av., Barthorpe-cres., Gledhow Park-rd. (pt), Montreal-av. (pt.), Potternewton Mount (pt.), Inge-rd. (pt.), for T.C. E. W. Cockerlyne, Highways Engineer, 155, Kirkstall-rd., 4. Dep. £1 1s.

Southend-on-Sea. — Making-up. — The Drive and Hamboro-gdns., for C.B. E. H. Dyer, B.E. and S. Dep. £1 each road.

MARCH 11.

Leicester.—Sewerage.—Laying of concrete roads and sewers, etc., on Freake's-ground site, for T.C. J. S. Fyfe, A.R.I.B.A., Housing Architect. Dep. £2 2s.

Wallingford.—Extension.—580 yds. of 9-in. stoneware pipe sewers with manholes, and incidental work, in Wantage-rd., for T.C. Fiddian & Deeley, engineers, 13, Church-st., Stourbridge. Dep. £2 2s.

MARCH 13.

Maldens and Coombe.—Sewer.—Laying surface water sewer from Dickerage-rd. to Traps-lane, for U.D.C. R. H. Jeffes, E. and S. Dep. £2 2s.

MARCH 14.

Caterham and Warlingham. — Making-up.—Of Maple-rd., Whyteleafe, and Stafford-rd., Caterham Valley, for U.D.C. E. and S. Dep. £2 2s.

MARCH 15.

Soke of Peterborough.—Macadam.—Laying of 8,580 super yds. of granite tarred macadam on the St. James Deeping-rd., for C.C. H. Russell, C.S., Cross-st., Peterborough.

MARCH 16.

Harrow-on-the-Hill.—Improvements.—Of Ashburnham-av., Ashburnham-gardens, Brooke-av., Wood End-av. and Westwood-av., for U.D.C. J. P. Bennetts, E. and S.

London.—Paving.—Laying bituminous surfacing materials, including maintenance of new surfaces, in carriageways of Cheniston-gardens (throughout), Hesketh-pl. (throughout), Kenway-rd. (Earls Court-rd. to Wallgrave-rd.), Mary-pl. (Sirdar-rd. to Avondale Park-rd.), Sirdar-rd. (Treadgold-st. to Kenilworth-st.), Wilsham-st. (Princes-rd. to Sirdar-rd.), Wetherby-rd. (Earl's Court-rd. to Bina-gardens), for Kensington B.C. B.E. and S.

MARCH 17.

Pembrokeshire.—Improvements.—Corner improvement and a short length of rd. at Stoops Lake, near Pembroke, for C.C. A. H. Thomas, A.R.I.B.A., C.S., Willesden House, Haverfordwest. Dep. £2 2s.

MARCH 18.

Cairo. — Asphalt. — 350 tons of liquid asphalt "soft," 280 tons of liquid asphalt very soft, or coal gas tar, spraying with bituminous material of 210,000 sq. metres at roads in Cairo and its suburbs, for Director-General, Tanzim Department, Cairo. Inspecting Engineer to the Egyptian Government, 41, Tothill-st., London, S.W.1.

MARCH 20.

Edmonton. — Making-up.—Of Oakfield-gardens, Oakfield-gardens passageway and Hinton-rd. (part), for U.D.C. E. J. Willis, E. and S. Dep. £2 2s.

London.—Paving.—New wood block paving on reinforced concrete foundations, concrete roadways, etc., in Camberwell-rd. (part of), Peckham-rd. and High-st. (parts of), Glengall-rd. (part of), and Colegrove-rd., for Camberwell B.C. W. Bell, B.E. and S.

Southport.—Main.—Laying about 3,330 lin. yds. of 18-in. dia. cast-iron pumping main, complete with all valves and fittings, from site of intended Blundell House pumping station, in parish of Halsall, to Gorse Hill reservoirs, in parish of Aughton, for Water Board. C. Burton Ede, E., 14, Portland-st.

MARCH 21.

Reading.—Drainage.—740 yds. of 15-in., 18-in. and 30-in. concrete tube surface water sewer near Shinfield-rd., for C.B. B.S. Dep. £2 2s.

MARCH 22.

Birmingham.—Extension.—Of Cole Valley sewer from Baldwins-lane and crossing under the Great Western Railway, Hall Green, for T.C. H. H. Humphries, City E. and S. Dep. £2.

MARCH 25.

Oxfordshire.—Tarspraying.—Of county rds., for C.C. G. T. Bennett, C.S., 8, New-rd., Oxford.

MARCH 28.

Staines.—Sewerage.—16 miles of cast-iron pipe sewers varying from 21-in. dia. to 6-in. dia., with manholes and other works incidental thereto, at Ashford, for U.D.C. D. C. Fidler, E. and S. Dep. £5.

MARCH 29.

Stockport.—Pipes.—Valves, pipes, ironwork, etc., in connection with Fernilee reservoir, for T.C. G. H. Hill & Sons (Manchester), 40, Kennedy-st., Manchester. Dep. £3 3s.

MARCH 31.

Cheshire.—Roads.—Road diversion at Bunker's Hill on Hazel-grove-Romily-rd., Bredbury and Romily, for C.C. G. E. Ashforth, C.S., The Castle, Chester. Dep. £5 5s.

Public Appointments

MARCH 8.

★**Battersea, S.W.11.**—Temporary Surveying Assistant.—T.C., Town Hall.

MARCH 11.

★**Hereford.**—Chief Architectural Assistant, for the Herts C.C. Clerk, Shirehall.

L.M.B. Sports Association.

We give below results and table in connection with the Football League of this Association up to and including Saturday, February 25 :—

Feb. 4.—Higgs	...	3	Limmer	...	6
,, 11.—Limmer	...	2	Higgs	...	9
,, 25.—Tellings	...	20	Limmer	...	1

	P.	W.	D.	L.	Goals. F.	A.	Pts.
Tellings ...	8	8	—	—	56	7	16
Higgs ...	9	5	—	4	37	24	10
Limmer ...	9	5	—	4	19	42	10
Trocoll ...	10	5	—	5	20	17	10
Ham River	6	3	—	3	7	16	6
Downs ...	10	—	—	10	3	36	0

CURRENT & PROPOSED BUILDING WORK*

Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education; M.W.B. for Metropolitan Water Board; Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

Alcester.—H. Peter Ring, F.R.I.B.A., 121, Colmore-row, Birmingham, architect for rebuilding "Rose and Crown Hotel," Portway.

Aldridge.—Trustees of Methodist Church propose church hall at £6,000.

Annfield Plain.—Mr. Elliott, S., been instructed by U.D.C. to prepare plans and estimates for houses for aged people at Dipton.

Ardrossan.—T.C. adopted slum-clearance scheme of 12 houses; site in Dalry-rd.

Ashington.—U.D.C. proposes 66 houses for aged persons. Tenders invited. G. Beaty, S.

Barnes.—Plans passed by U.D.C.:—12 flats, Upper Richmond-rd., junction with Derby-rd., by Meakin, Archer & Co., for Frank Mousley.

Barrow-in-Furness.—McDowell's, clothiers, 10 and 12, Cavendish-st., propose additions to premises. F. J. Parker, L.R.I.B.A., architect, 8, Princess-st.

Belfast.—Corporation Markets Committee propose extend the accommodation for slaughtering of sheep at public abbatoir at £12,500.

Bentley.—Miners' Welfare Committee notified Bentley Colliery authorities of intention to erect pit-head baths and canteen at collieries. Plans by J. H. Forshaw, Mines Dept., Dean Stanley-st., W.1. Tenders to be invited.

Billingham-on-Tees.—School clinic to cost £2,500 to be built by Durham C.C. Site been secured and plans being prepared. W. J. Marrett, C.S., 43, Old Elvet, Durham, County Surveyor.

Birkenhead.—Neston Housing Society propose 20 houses, Burton-rd., Neston.

Birmingham.—Alterations proposed to bank premises in Stratford-rd. for Midland Bank, Ltd., Poultry, London, E.C.2. Architects, Whinney, Austen & Hall, 37, Norfolk-st., London, W.C.2. Tenders invited.

Blaydon-on-Tyne.—M.H. sanctioned erection by U.D.C. of 24 houses of ordinary type and 60 houses for aged people. E. Mastaglio, S.—Durham C.C. to build school clinic at £2,500. Scheme approved. W. J. Merrett, C.S., 43, Old Elvet, Durham.

Bolton.—Managers of St. Peter's and St. Paul's Church propose special departments at schools. H. Greenhalgh, architect, 15, Mawdesley-st.—F. Holmes, builder, 60, Allenby-rd., St. Annes-on-Sea, proposes to develop portion of Hulton estate at junction of Hulton-lane and St. Helen's-rd. as housing estate. Lay-out provides for 130 houses.—Leigh Bros., Ltd., Bark-st., propose to develop estate between Ivy-rd. and Clough-rd. for houses. Plans prepared for 150 houses.—H. Greenhalgh, architect, 15, Mawdesley-st., preparing plans for schools for Rev. J. Lawless, St. Mary's.

Bradford.—Kellett, Woodman & Co., Ltd., 44, Union-st., propose alterations to works at Great Horton. W. J. Morley & Son, F.R.I.B.A., architects, 269, Swan-arcade.—T.C. propose shops on Haworth-rd. off Chellow Grange housing estate.

Bridlington.—Housing and Town Planning Committee to make application for sanction to build 120 houses.—T.C. proposes maternity and child welfare centre.

Brighouse.—L. Parkinson, Southfield, South-rd., Lancaster, to develop land near Borough Market for shopping centre.

Bristol.—Among the objects for which Lord Mayor of Bristol's Hospitals Extension Fund will be used is remodelling of old out-patients' department at General Hospital for electrical massage and special treatment.

Buckhaven.—Church is to be erected for United Free Church. J. Black.

Carlisle.—T.C. approved: Building estate, Waverley-rd., Mrs. Newton, Benwell & Slack.

Carnforth.—Parochial Council of Arnside Parish Church propose vicarage.

Cashel.—V. Kelly, 87, Merrion-sq., Dublin, been appointed architect of Tipperary (South) County Board of Health for modernisation scheme, which includes central hospital at Cashel, district hospital at Clonmel, cottage hospital for Slieveardagh, and renovation of existing hospitals in Tipperary, Carrick-on-Suir and Clogheen.

Castlederg.—Northern Ireland Ministry of Finance approved application for loan for conversion of fever hospital to district hospital.

Cavan.—U.D.C. decided to build 60 new houses.

Chester.—T.C. recommend approval to plan prepared by City S. for building upon vacant space at rear of public baths in Forest-st. for purpose of pro

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*See also List of Contracts, Competitions, etc.

***** In these lists every care is taken to ensure that information given is accurate and up to date, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced.**

viding extra dressing accommodation.—City Surveyor to prepare scheme for parlour houses upon Lache estate for sale.—Plans passed: 7 bungalows, Mannings-lane, Hoole Village, F. Nile & Son; mineral water factory, Queen's Park-rd., Thomas & Evans.

Chesterfield.—T.C. appointed W. A. Derbyshire, architect, Glumangate, to prepare plans for extensions to police and fire brigade headquarters.

Church Stretton.—Ringwood's, Ltd., 28, Broadway, Hammersmith, W.6, propose licensed premises at junction of Shrewsbury and Hereford-rds. and Ashlet-av. to be known as "Longmynd Hotel."

Clowne.—R.D.C. decided to erect 10 houses in each of parishes of Clowne, Creswell, and Whitwell for aged persons.

Coalville.—Leicestershire E.C. approved plans for junior Council school proposed at Coalville to accommodate 800 children.

Colwyn Bay.—Board of Governors of Colwyn Bay and West Denbighshire Hospital, Hesketh-rd., proposing nurses' home for institution. Plans by S. Colwyn Foulkes, M.Arch., A.R.I.B.A., Central-chams. Tenders not yet invited.

Corbridge-on-Tyne.—Tenders will shortly be invited for extensions to Charlotte Straker Cottage Hospital. W. Dixon & Sons, architects, 1, Collingwood-st., Newcastle.

Coulsdon and Purley.—U.D.C. instructed S. to prepare plans for new convenience at Chalk Pit, Kenley.—Council approved sub-station by County of London Electric Supply Co., Ltd., for a transforming sub-station in Arundel-av., Selsdon.—Plans been submitted by E. B. Clarke, and approved, for five pairs of semi-detached houses and garages, and one detached house and garage, in Petersfield-crescent, Coulsdon.—Plans passed: Stanford & Co., 4 shops, with living accommodation over, Stoats Nest-rd., Coulsdon; H. Bacon & Son, Ltd., 11 cottages, Gidd Hill, Coulsdon.

Cumberland.—M.H. sanctioned Cumberland C.C.'s proposal that £3,045 be borrowed for reconstruction of Moss Bay railway bridge on Workington-Harrington County-rd.

Cupar.—Proposal to build 48 houses before Housing Committee of T.C.

Dalmarnock.—J. Robbe, 495, Baltic-st., Bridgeton, Glasgow, to repair chimney stack at Dalmarnock sewage works.

Darlington.—M.H. sanctioned borrowing of £15,346 for 54 houses in Hundens-lane and £2,642 for extensions to Girls' High School and £19,500 for 68 houses in Hundens-lane.

Dublin.—Corporation Housing Committee has on hand a £2,000,000 scheme for clearing and rebuilding a 40-acre slum area, north side of city.

Dukinfield.—Wilson's Brewery, Ltd., Monsall-rd. Brewery, Newton Heath, Manchester, propose extensions to "Minder's Arms" public-house. Plans by W. Johnson & Sons, 27, Oldham-rd., Miles Platting.

Dunfermline.—Fife E.C. agreed to forward proposals for reconstruction to St. Margaret's Catholic School to Fife C.C.

Durham.—C.C. decided to forward urgent road and bridge schemes estimated to cost £317,805 to M.T. W. J. Merrett, C.S.—County Health Committee to provide verandahs at Tindale-crescent and Helmington-row hospitals at £1,500. Plans by W. J. Merrett, C.S., 43, Old Elvet, Durham.

Ealing.—B.S. to negotiate for land for housing in St. Margaret's-rd., Hanwell.—Council recommend that conveniences be erected in St. Mary's-sq. (South Ealing-rd.) and in Northfield-av. at entrance to Lammas-pk., and that Recreation Grounds and Sports Committee be asked to acquiesce small portion of park at Northfield-av. entrance for same purpose.—Plans passed:—21-32, Thorneville-ter., Bilton-rd., 12 houses; 1-35-odd, 2-36 even, Lynmouth-rd., 36 houses; Empire-rd., 44 houses; 2-8 even, Jordan-rd., 4 houses, for the Hillingdon Estate Co. (architects, Swannell & Sly, High-st., Rickmansworth); Eaton-rise and Montpelier-rd., Thorpe Hall Mansions, block of flats (20 flats), for Thorpe Hall Mansions, Ltd. (surveyors, W. H. Read & Co., Ltd., 41, Haven Green, Ealing, W.5); 113-153 odd, Hill-rise, 21 houses, for C. & T. Ware, 62, Birkbeck-av., Greenford; Perivale-lane, 6 houses, for E. Lancaster & Sons, 30, Ealing-rd., Wembley; 7-12, Abbey-ter., North Circular-rd., 6 houses, for Hart & Hardaker, Ltd., "Woodside," Uxbridge-rd., Wealdstone; 38 and 40, 38a, and 40a, Wordsworth-rd., one block of flats (4 flats), Greenford-rd., 3 blocks of flats (40 flats), 144-174 even, 144a-174a, Greenford-rd., 2 blocks of flats (32 flats), for Greenford Estates, Ltd., Greenford Hall Estate, Costons-lane, Greenford; 9-49 odd, Federal-rd., 2-42 even, Fairfield-drive, 21 houses, for Smirk & Sons (architect, G. L. Russell, 1, Broad-st.-bldgs., E.C.2); Broomfield-rd., stables, for the United Dairies, Ltd. (Architect's Dept.), 34, Palace-court, W.2; Perivale-lane, alterations and additions, for W. J. & J. H. Boothman (1930), Ltd., Perivale-lane, Greenford; Uxbridge-rd., alterations, for W. J. Daniel & Co. (architects, Ley Colbeck & Partners, 214, Bishopsgate, E.C.2); 17, 23, 26 and 32, Torrington-rd., garages with bedrooms over, for Hillingdon Estate Co. (architects, Swannell & Sly, High-st., Rickmansworth); The Bridge, Uxbridge-rd., alterations at 3 and 4, for United Dairies, Ltd. (Architect's Dept., 34, Palace-court, W.2); Ealing-rd., Northolt, additions and drainage to "Deyntes Cottage," for B. Martin (architect, F. C. Button, "Orchardleigh," Ickenham-rd., Ruislip).

Edinburgh.—Dean of Guild Court given permission for alterations to J. & R. Allan, Ltd., premises at 77-84, South Bridge, from plans by A. H. Mottram, 59, Frederick-st.

Egham.—U.D.C. approved:—38 houses at Pooley Green-rd., J. P. Scott; lay-out plan, 159 houses and shops, off Thorpe-rd., S. H. & C. J. Few.

Epsom.—R.D.C. approved application of Atkinson & Marler to erect Baptist chapel on land at junction of The Glade and Chadacre-rd., Cuddington.

Four Marks (Hants).—Priest-in-charge and congregation of Church of Good Shepherd, Four Marks, to build themselves new church.

Glasgow.—Additions to be made to Barnhill Institution for Corporation.

Glasgow.—W. & M. Duncan, 40, St. Enoch-sq., Central Glasgow, to reconstruct and extend factory.

Glenmavis.—Repairs to be carried out outside of Glenmavis police station for Lanarkshire C.C.

Greenock.—Corporation Master of Works been authorised to raise sea wall at Battery-pk. swimming pond at £100.—Corporation to build pavilion at Lady Octavia-pk. from plans by R. Millar, Master of Works.

Grimsby.—T.C. approved:—123 houses, Hewins & Goodhand, Eleanor-st.; 114 houses, Steel & Goddard, Somersby-st.; 75 houses, Drayton Bros., "Highfield," Portland-place; 41 houses, A. & C. Drew, Lindum-rd., Cleethorpes; 42 houses, F. A. Would, Carr-lane, Grimsby; 8 houses, S. Cartledge, Carr-lane, Grimsby.

Harrogate.—H. Beecroft Downs, A.R.I.B.A., architect, 2, Station-bridge, preparing plans for greyhound racecourse at Hilton.

Hemsworth.—Joint Hospital Committee propose additional accommodation at nurses' home, Brierley Hospital.

Horden.—B. of E. given sanction to County E.C. to provide 300 school places in proposed portable buildings.

Hull.—City Council to reconsider decision in relation to land which is to be purchased in Ferensway for site for proposed coaching station and garage.

Jarrow-on-Tyne.—T.C. proposes converting part of lake in West-pk. into paddling pool at £380. J. Scott-Weir, B.E.

Keighley.—R.D.C. approved: Lay-out, 75 houses, Sandbeds, Morton, A. Crowther; 8 bungalows, Bradford-rd., Riddlesden, E. Procter; alterations, Soldiers' and Sailors' Club, Steeton.

Kendal.—F. W. Oxberry, B.S., prepared plans for open-air school at £5,000 for E.C.

Kidderminster.—Canon L. B. Sladon and Parochial Council of St. Mary's Church propose repairs to fabric, at £1,000. W. Hubert Godwin, F.R.I.B.A., Bank-bldgs., architect.

Leeds.—B. of E. approved plans for school in Torre-rd. on site purchased from Corporation for senior girls' school for Catholic Authorities of St. Patrick's. (Very Rev. Dean Vermiere, P.P.). Architects, Empsall, Clarkson & Clarke, FF.R.I.B.A., Permanent-chams., Piece Hall-yd., Bradford. Accommodation for 280 pupils.

Leeds.—Wilkinson & Warburton, West-st., propose alterations to premises corner of King-st. and Park-place.

Leicester.—Markets Committee decided to proceed with reconstruction of Corn Exchange. Cost of work will be nearly £10,000.

Leyland.—U.D.C. approved plans for Leyland Methodist Trustees for school in Turpin Green-lane. Architect, F. Howorth, L.R.I.B.A., 10, Theatre-st., Preston.

Liverpool.—T.C. recommend that Land Steward and Surveyor be requested to prepare plans for Dovecot senior school to be erected on site in Page Moss-lane, Knotty Ash.—Council recommend that plans prepared by Land Steward and Surveyor of proposed senior school for girls to be erected on site adjoining Fazakerley Cottage Homes, be adopted and forwarded to B. of E. for approval.—Application to be made to M.H. for consent to appropriation of site and premises of school attached to Fazakerley Cottage Homes, which is being transferred to E.C. by Port Sanitary and Hospitals Committee.—M.H. forward formal sanctions to borrowing by Corporation of £2,170 for two bowling greens, bowls house, conveniences, children's gymnasium and rest garden at St. Martin's recreation ground.—Land situate on north side of Tynwald Hill, Stoneycroft, be sold to J. H. Riding, 33, Ashdale-rd., Liverpool, for erection of buildings.

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Longridge (Lancs).—Local branch of ex-Service men propose club headquarters in Warwick-st. J. Miller, architect, 14, Chapel-st., Preston. Contracts not let.

London (Eltham).—L.C.C. recommend £1,117 5s. in respect of appropriation of site for the extension of the fire brigade workshops.

London (Hackney).—B.C. recommend that Nisbet-st., Clarence-terr. and Fulham-pl. areas be dealt with as clearance areas. Plans passed: G. Parker & Sons, Ltd., works at 129-133, Mare-st., E.8; H. C. Horswell, Ltd., works at "The Duke of York" p.h., 26, Berger-rd., E.9; Mullen & Lumsden, Ltd., works at 45 and 47, Ellingford-rd., E.8; C. J. Bailey, works at "The Duke of Marlborough" p.h., 212, Richmond-rd., E.8, and W. Loweth & Sons, Ltd., works at "The George" p.h., Glyn-rd., E.5.

London (Lambeth).—B.C. approved: P. A. Powell, one-storey building, rear of 57, Camberwell New-rd.; D. Greig, Ltd., shop additions at 25 and 31, Acre-lane; H. W. Binns, Ltd., garages approached by a way out of the north-western side of Denmark-hill; Lansdowne Building Co., alterations and additions, 2, Fentiman-rd.; J. A. C. Messenger, church hall adjoining St. John's Church, Angell-rd.; P. Owen Dunk, hall, Lovelace-rd.

London (St. Pancras).—B.E. to carry out certain redecoration work in Council Chamber during summer recess.—Council recommend approval to provision of electricity supply for cooking, heating and hot water at flats in Leighton-rd. housing scheme at £960.

London (Woolwich).—B.C. to instruct B.E. to spend £1,621 on repairs and renovations to town hall and offices and £860 on fencing "Harrow Meadow" recreation ground.—Council recommend subject to loan being sanctioned work of constructing wall and fencing round cemetery in accordance with scheme by B.C., and preliminary work of clearing site be carried out by direct labour.—Plans approved as submitted by B.E. for New Eltham convenience.—Plans passed:—H. & J. Taylor, Canada House, Hither Green, S.E.13, on behalf of L.C.C., alteration and additions to buildings and drainage at casual ward and new superintendent's house, and drainage, Hull-place, Plumstead; W. Seymour & Co., 5 and 7, Ellis-st., Sloane-st., S.W.1, 10 houses, 130 to 148, Eltham-rd., Eltham; T. Hunt & Sons, 42, High-rd., Mottingham, on behalf of the Trustees, Philipots Charity, wood and gardener's stores at almshouses, Back-lane, Eltham; S. W. Ackroyd, Commonwealth-bldgs., Albion-rd., Woolwich, on behalf of Royal Arsenal Co-operative Society, Ltd., Royal Arsenal-Co-operative Stores on north-east side, Middle Park-av., Eltham; Sykes & Pomfret, 8, Park-place, Eltham, shops, next Lannoy-rd., Avery Hill-rd., Eltham; F. H. Ayling, Ltd., Kynaston-works, Thornton Heath, shops, Wickham-lane, Plumstead; Hilbery Chaplin, Ltd., 4, Russell-parade, N.W.11, 32 houses, Garland-rd., Plumstead; G. S. N. Stone, Staple Inn-bldgs., High Holborn, W.C.1, on behalf of Kem Estate, 20 houses, Sidcup-rd., Eltham.

Manchester.—T.C. approved plans for rebuilding "Halfway House Hotel," Middleton-rd. and Bury Old-rd., Crumpsall, for Phœnix Brewery Co., Ltd., Green-lane, Heywood.—District Bank, Ltd., 15, Spring-gardens, propose branch bank at Altrincham-rd., Northern Etchells. Architects, Francis Jones & H. A. Dalrymple, 178, Oxford-rd.—Paramount Garages, Ltd., Cheetham Hill-rd., propose petrol station and garage adjoining L.M. and S. station, Parrswood-rd., East Didsbury.—J. G. Swales & Co., Ltd., Naval Brewery, Junction-st., Hulme, propose hotel at corner of Mount-rd. and Duras-rd., Gorton. Plans by N. Hartley Hacking, 5, Blackfriars-st. Scheme in preliminary stages.

Meath.—F. G. Hicks been appointed architect for extensions to Meath Hospital and County Dublin Infirmary.

Middlesbrough.—T.C. proposes pavilion in Pallister-pk. Tenders invited. S. E. Burgess, B.S.

Milnthorpe (West Yorks).—Tenders being invited for additions at "Star Inn" for Barnsley Brewery Co., Ltd. Plans by Mr. Raper, architect to company, Pontefract-rd., Barnsley.

Montrose.—Dean of Guild Court passed plans submitted by R. Pert & Sons, Ltd., for offices in Lower Balmain-st.

Monkseaton.—L.N.E.R. Co., Ltd., started preliminary work in connection with building railway station. Work being done by Direct Labour to plans by J. Miller, Chief Engineer (North Eastern Area), York Station.

Newark.—T.C. approved scheme for bathing pool on land in Barngate.

Newcastle-under-Lyme.—Hollins & Jones, A. & L.R.I.B.A., Lloyds Bank-bldgs., architects for additions to Orme boys' modern school.

Norwich.—Steward & Patteson, Ltd., Pockthorpe Brewery, proposing licensed premises in Harvey lane. Plans being prepared by brewery's resident architect, L. Towler.

Omagh.—B. of G. decided to erect laundry at union workhouse.

Ormskirk.—Scheme to carry out alterations at Ormskirk Institute at £1,240 being considered by members of Lancashire Public Assistance Committee.

Rawmarsh.—Baths Committee instructed S. to prepare plans for baths for children.

Reading.—B.S. to prepare plans for additional accommodation at Park hospital.

Reigate.—"White Hart Hotel" to be rebuilt.

Retford.—Meeting been held at Retford regarding establishment of fruit canning factory.

Richmond.—Middlesex C.C. voted £1,000 for immediate repairs of one of piers of Richmond bridge.

Rochdale.—Health Committee propose to adapt

portion of old fire station property in Alfred-st. for municipal clinic.

Ruswarp.—North Riding C.C. including £10,000 for reconstruction of Ruswarp bridge. R. Sawiell, C.S., Northallerton, S.

Sandown.—Inquiry held by M.T. into Council's application for loan of £26,000 for concert hall on pier.

Scarborough.—R.D.C. appointed Mr. Baker architect for 32 houses for agricultural workers.—Council to invite 8 houses at West Ayton.

Sheffield.—Rawcliffe & Ogden, LL.R.I.B.A., 39, Norfolk-st., architects for reconstruction after fire of cabinet works in Moorhead.—H. E. Mottram, builder, Reed-st., proposes to develop site at Banner Cross, formerly grounds of Banner Cross Hall, for good-class houses.

Shrewsbury.—W. Butler & Co., Springfield Brewery, Wolverhampton, proposing licensed premises at Woodfield-av., St. Chad's.

Southport.—C.E. Authorities to make alterations to Holy Trinity Schools. Diocesan Architect, Rowland Stubbs, L.R.I.B.A., 14, Cook-st., Liverpool.

South Shields.—M. Jackson & Sons (Clothiers), Ltd., Clayton-st., Newcastle, acquired premises in Market-place and King-st., for conversion into branch premises. Glass, Harrison & Ash, 20, Saville-row, Newcastle, architects.

Stirling.—D. W. Glass, Dumbarton-rd., architect for 12 houses at East Plean and 12 houses at Plankerton for C.C.—For alterations at Binniehill, Slamannan, for Peddie Waddell, architects are J. Scotland & Son, 12, Brooknoll-st., Airdrie.

Stockport.—Stockport Greyhound Racing Association propose club-house and kennels on Hazel-grove racing track.

Stockton-on-Tees.—Extensions scheme of additions proposed by —. Robinson, drapers, at premises at The Coliseum, Stockton.—T.C. to build bus shelter and waiting room at Butts-lane, Yarm. No contracts settled. J. P. Wakeford, B.E.

Stoke-on-Trent.—T.C. approved:—S. Allsopp & Sons, Ltd., "Ram's Head Inn," Market-place, alterations; and "New Vaults Inn," Market-place, alterations; Miners' Welfare Committee, Broads Row, Norton, pavilion institute; A. Lilley, Longton-rd., Bucknall, 12 houses; J. Jourie & Son, "Saracen's Head Inn," Sandon-rd., Meir, rebuilding; North Staffs Royal Infirmary, Hartshill, additional ward block.

Sunderland.—M.H. granted Corporation permission to borrow £6,222 for building of 22 three-roomed houses on Carley Hill estate. Contract let to W. D. Allison, builder, Whitburn, Sunderland. T. P. Collinge, B.S.—It is proposed to erect R.C. school at Millfield. Rev. J. O'Dwyer, parish priest. —"Seaforth," residence in Sea View-rd., to be purchased by E.C. and converted into open-air school for 120 children. O. T. Mark, John-st., Sunderland, architect to committee.—R.D.C. proposes two bus shelters at Castletown-rd. end and Bank Top, South Hylton. H. Hitchens, S.

Tanfield.—U.D.C. to seek permission of M.H. to proceed with housing scheme at White-le-Head by direct labour.

Teddington.—Council approved amended scheme to extend the dressing accommodation by provision of wings to accommodate 11 extra cubicles and 72 lockers in each of the men's and women's dressing blocks at swimming bath. Estimated cost £475.

Thornaby-on-Tees.—T.C. proposes further 100 houses on Grange Farm estate. H. Kay, B.S.

Tynemouth.—T.C. has under consideration proposal to erect 36 self-contained houses for members of police force. J. L. Beckett, B.S.

Wakefield.—R.D.C. to proceed with houses on Warmfield and Kirkhamgate estates. Tenders to be shortly invited.

Wallsend.—T.C. negotiating for purchase of land at Bigges Main and Archer-st. for housing purposes.

Walsall.—Jeffries & Shipley, Kingscourt, Bridge-st., architects for 24 bed ward and domestic block at General Hospital for Board of Management.

Walthamstow.—T.C. approved:—Stores, 153, Wadham-rd., J. Sands; extension, 196-198, Hoe-st., P. G. Lees; factory extension, Howard Works, Billet-rd., Cuthbert, Lake & Smith; 7 garages and store, Forest-rise, C. W. Hodgson; warehouse and offices, corner Lea Bridge-rd. and Eastern-rd., A. J. Albert.

Warrington.—C.C. propose reconstruction of bridge over Bridgewater Canal at Stockton Heath at £9,000, and reconstruction of canal bridge at Preston Brook at £11,000.

Wealdstone.—M.H. sanctioned £9,700 loan for swimming bath at Wealdstone.

Wednesbury.—Joynson Bros., F.R.I.B.A., Lower High-st., architects for additions to King's Hill infants' and junior school for E.C.

Wem.—R. Holland, S., to prepare plans for layout of Acton Raynolds estate at Grinskill for Council houses.

Wesham.—Parochial Council of Parish Church propose parish hall.

Wexford.—C.C. consented to Health Board borrowing £125,000 for 500 cottages.

Whickham.—U.D.C. propose to demolish several old properties at Dunston and proceed with new houses in area. J. Fenbow, surveyor and architect.

Wickford.—Plans for joint mental hospital, to accommodate 1,600 patients, at Wickford been adopted by committee representing Boroughs of East Ham and Southend-on-Sea. B.S., East Ham.

Widnes.—Widnes Soap Co., Ellison-st., acquired buildings at Farnworth, near Widnes, for extensions.

Wolverhampton.—Cannock-rd. bridge to be strengthened to carry trolley bus traffic, at £4,430, for T.C.

Worthing.—Baptist church to be erected at West Worthing at £3,000. Secretary, Baptist Church.

Yarmouth.—T.C. approved:—Additions to offices, Regent-rd., for Corporation; new theatre, Regent-rd., for Regal Theatre Co.

SPECIALISTS AND SUB-CONTRACTORS

FEDERATION'S ANNUAL MEETING.

The first annual general meeting of the National Federation of Specialists and Sub-contractors was held on February 23 at Finsbury Court, E.C.2.

Mr. T. A. McIntyre (president) was in the chair, and the following associations were represented:—Association of Floor Constructors (Messrs. D. H. Green and W. G. Shipwright), Association of Flooring Contractors (Messrs. T. M. Fitzgerald and G. T. Hollis), Builders' Merchants Alliance, Ltd. (Mr. T. A. McIntyre), Cooking Apparatus Manufacturers' Association (Mr. C. G. Benham), Electrical Contractors' Association, Inc. (Mr. H. J. Cash), London Association of Master Slaters and Tilers (Mr. W. F. Halestrap), Master Carvers' Association of London (Mr. F. Morton), Metal Window Makers' Association (Messrs. Wm. Morris, G. A. Jones and H. A. Gadsdon), National Association of Heating, Ventilating and Domestic Engineering Employers (Messrs. F. A. Norris and F. H. Wilson), National Federation of Bridge and Structural Engineers (Mr. C. Roland Woods), National Federation of Builders' Merchants (Mr. P. E. Lines), National Federation of Master Painters and Decorators of England and Wales (Messrs. J. H. McDermid and Thos. Worthington), National Federation of Plumbers and Domestic Engineers (Employers (Mr. W. H. Braithwaite), National Federation of Slate Merchants, Slaters and Tilers (Mr. C. E. France), National Association of Lift Manufacturers (Mr. E. M. Medway), National Master Tile Fixers' Association (Messrs. H. Garton Ash and W. Rogers), Northern Association of Reinforced Concrete Engineers and Contractors (Mr. John Ross), Patent Glazing Conference (Messrs. F. T. Garratt and J. V. Lovell), Telephone Supplies, Ltd. (Mr. John G. Osborne). Mr. Percival Foddering, secretary, was in attendance.

Submitting the annual report and statement of accounts, the president stated that, in the view of the Council, a form of sub-contract should have been completed and published some time ago. The Council, however, were helpless as it was not until September 28, 1932, that the draft form was received from the builders. It was understood that the delay was due to the National Federation of Building Trades Employers endeavouring to agree a form with the Institute of Builders before submission to the Federation. The Council asked for a joint meeting which was held on October 25, 1932, when the builders heard the views put forward by the sub-contractors and specialists as a basis for negotiation. Not until the beginning of the present year did the Federation receive a reply from the builders. The Council considered this reply and came to the conclusion that it was hopeless to go forward on such lines. They appointed a committee of three and suggested that the builders should do likewise and asked them for a joint meeting in order that more rapid progress could be made. A joint meeting had taken place on February 21, and had been adjourned until March 9, when it was the intention, if at all possible, to conclude the discussions. The necessity for the Federation had been very apparent in other important directions. There was reason to believe that in the near future suggestions would be put forward to reduce the volume of work done by sub-contractors and specialists. Manifestly that would be an occasion for the Federation to act on behalf of its members.

Mr. F. A. Norris seconded the resolution, and then proposed the re-election of Mr. T. A. McIntyre as president of the Federation. This was seconded by Mr. J. H. McDermid, and was carried unanimously.

The retiring members of the Council were re-elected *en bloc*. Mr. J. L. Musgrave and Mr. H. J. Cash were unanimously re-elected treasurer and auditor respectively.

In the course of discussion the President remarked that members would have seen references in the minutes to the formation of the Building Industries National Council. Surprise had been expressed that this Federation was not represented on the organising committee. This committee, however, was constituted before this Federation had been formed, and no other body had been co-opted until after the work of organisation had been completed.

A proposal by Mr. C. Roland Woods that the Federation should affiliate with the Building Industries National Council was carried and was remitted to the Council of the Federation to consider and arrange the procedure to be adopted.

The President pointed out that the Joint Tribunal to consider any difficulties which might arise in connection with the 1931 form of main contract had now been constituted under the chairmanship of Mr. Sydney Tatchell, and the Federation had been requested to nominate one of its members to be available to act and consult with the tribunal when questions affecting the interests of specialists and sub-contractors arise.

GAS IN INDUSTRY

Members of the technical Press were afforded an opportunity on February 22 of visiting the British Industries Fair at Castle Bromwich and seeing what is being done in Birmingham in the development of the uses of gas for industrial purposes. About 40 members of the party, which was organised by the British Commercial Gas Association, were received at the Gas Offices at the Council House by Alderman J. H. Lloyd, chairman of the Gas Committee and a past-president of the Association, and were shown over the Physical and Mechanical Testing Department of the Industrial Research Laboratory at the Gas Department. Subsequently they went to Windsor-street Gas Works, where they inspected, in the heat treatment shop, a large selection of different types of heat treatment furnaces. Here work is carried out regularly for manufacturers both for demonstration purposes and for definite production. They also saw a compressor for compressing gas up to 5,000 lb. per square inch, and were particularly interested in the gas-filling station from which the gas-driven bus which conveyed them from the centre of the city is supplied.

In a short speech, Alderman Lloyd recalled that it was 24 years since the Birmingham Gas Committee initiated a special organisation for research into the possibilities of the utilisation of gas for industrial purposes. The success which they had attained in their efforts to develop the uses of gas in industry was indicated by the fact that, whereas in 1909 the total load for those purposes was roughly 600,000,000 cubic feet, it had now reached the huge figure of approximately 4,000,000,000 cubic feet, roughly 28 per cent. of Birmingham's total consumption. They had been fortunate in having as head of this particular department in Birmingham Dr. Walter, who had been with them since its initiation in 1909, and had accumulated a vast amount of experience and knowledge of manufacturers' trouble and the best methods of dealing with them.

Subsequently the party was entertained to lunch at the Grand Hotel. Mr. A. W. Smith, general manager and secretary of the Birmingham Gas Department, presided, in the absence of Sir Francis Goodenough, the executive chairman of the British Commercial Gas Association.

New Aerodrome, Iraq.

Preliminary plans have been prepared for the construction of a large aerodrome and base depot at Duban, 50 miles west of Baghdad, for the Royal Air Force. Detailed estimates have not yet been formulated, but the cost is expected to amount approximately to £1,000,000. The works will be under the direction of the Air Ministry's Architectural Staff at Adastral House, Kingsway, W.C.2.

PRICES CURRENT OF MATERIALS.*

Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by enquiry

BRICKS, &c.

Per 1,000 Alongside, in River Thames, up to London Bridge.

	£ s. d.
Best Stocks	4 3 6
Second Hard Stocks	3 18 6

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
"Phorpres"	2 11 3	Flettons, B'ln'se	3 5 3
Flettons at King's Cross	2 11 3	Best Blue Pressed Staffs	9 5 0
Do., grooved for Plaster	2 13 3	Do. Bullnose	9 15 0
		Blue Wire Cuts	7 5 0

White Midhurst Facing Bricks (delivered London site) 5 0 0
"Phorpres" Whites (do.) 3 17 3
"Phorpres" Rustic Facing Bricks, delivered Central London per 1,000 3 12 3
Best Stourbridge Fire Brick :—
2½ in. 8 11 0 3 in. 10 3 0

GLAZED BRICKS—

Best White Ivory and Salt Glazed Stretcher	21 0 0	D'bie Str'tch'rs	29 10 0
		D'bie Headers	26 10 0
Headers	20 10 0	One side and two Ends	30 10 0
Quoins, Bullnose and 4½ in. Flats	27 10 0	Two Sides and one End	31 10 0
		Splays and Squints	28 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

PARTITION SLABS.

Delivered London Area.

CLINKER CONCRETE.

2" per yd. sup.	1 6	3" per yd. sup.	2 0
2½ " "	1 8	4" " "	2 4

CRANHAM TERRA COTTA.

2" per yd. sup.	3 3	3" per yd. sup.	3 10
2½ " "	3 7	4" " "	4 4

HEMPSTEAD—KEYED TWO SIDES.

2" per yd. sup.	3 3	3" per yd. sup.	3 9
2½ " "	3 6	4" " "	4 3

	s. d.	
Thames Ballast	6 6 per yd.	delivered 2 miles radius Paddington.
Pit Ballast	5 6 " "	
Pit Sand	7 0 " "	
Washed Sand	7 6 " "	
½ in. Shingle	6 6 " "	
¾ in. Broken Brick	10 6 " "	
Pan Breeze	7 6 " "	

CEMENT.

Per ton delivered in London area in full van loads.

Best Portland Cement. British Standard Specification. Test	
In Jute Sacks (11 to ton)	£2 4 9
In Paper Bags (20 to ton)	2 6 0
Colorcrete No. 1 & 2 Coloured Rapid Hardening Portland Cement in 1 cwt. paper bags free (non-returnable) 20/- per ton above Portland Cement Price.	
"Snowcrete" White Portland Cement in 1 cwt. paper bags free (non-returnable) 190/- per ton.	
Alongside Vauxhall in 80 Ton Lots	
Jute Sacks (11 to ton)	1 17 9
Paper Bags (20 to ton)	1 19 0
Ferrocrete per ton extra on above	0 7 6
Vitrocrete per ton extra on above	0 7 6

NOTE.—Jute Sacks are charged 1s. 6d. each and credited 1s. 6d. each nett if returned in good condition within three months, carriage paid.

Super Cement (Waterproof) Paper Bags free	3 16 0
Roman Cement	6 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
" " Pink	5 10 0

PLASTER.

Plaster, Coarse, Pink	3 0 0
" " White	3 12 6
" Fine	4 12 0
Strapite, Coarse	3 9 0
" Finish	3 17 0
Grey Stone Lime	2 5 0
Chalk Lime	2 5 0
Best Ground Blue Lias Lime	1 17 6
Hair per cwt.	2 2 6
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d., if returned in good condition within three months carr. pd.

Stourbridge Fireclay in sacks 37s. 0d. per ton at rly. dep.

STONE.

	s. d.
BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	2 10
BEER STONE—RANDOM BLOCK—	
Free on rail at Seaton Station, per ft. cube	2 3
Delivered free on rail Nine Elms, S.R. per ft., cube	3 1½
Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra.	
PORTLAND STONE—	
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4 4½
Do. do. delivered on road waggons at above stations, per ft. cube	4 5½
White basebed, 3d. per ft. cube extra.	
NOTE.—1d. per ft. cube extra for every foot over 20 ft. average, and ½d. beyond 30 ft.	
HOPTON-WOOD STONE—	
F.O.R. Quarries, Wirksworth, Derbyshire,	s. d.
Random blocks from 10 ft. and over P.ft.cb.	14 0
Sawn two sides	22 6
Sawn, three or four sides	27 6
CHILMARK—RANDOM BLOCK—	s. d.
At Nine Elms, per ft. cube	3 11
YORK STONE, BLUE—*Robin Hood Quality.*	
Delivered at any Goods Station London.	
6 in. sawn two sides landings to sizes (under 30 ft. super) .....Per ft. super	5 6
6 in. rubbed two sides, ditto ..... "	6 0
3 in. sawn two sides slabs (random sizes) "	2 3½
2 in. to 2½ in. sawn one side slabs (random sizes) "	1 6½
1½ in. to 2 in. ditto "	1 3½
HARD YORK—	
Delivered at any Goods Station, London.	
Scappled random blocks .....Per ft. cube	6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) .....Per ft. super	5 1½
6 in. rubbed two sides, ditto .... "	6 1½
4 in. sawn two sides slabs (random sizes) "	3 1½
3 in. ditto ditto "	2 8
2 in. self-faced random flags....Per yd. super	8 0

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 8s. 6d.; Moulded, 9s. 6d.; Cills, 10s. 0d.

SOFT WOOD.

GOOD BUILDING DEAL.

Inches.	Per stan.	Inches.	Per stan.
4 × 11	£23 10	3 × 6.....	£17 10
4 × 9	22 10	3 × 11.....	19 10
4 × 8	21 0	2 × 11.....	19 10
4 × 7	19 0	3 × 9.....	19 10
3 × 8	18 0	2½ × 9.....	19 10
3 × 7	18 0	3 × 4½	17 10
2½ × 7	18 0	3 × 4.....	17 10

PLANED BOARDS.

1 × 11	£22 10	1 × 9.....	£21 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
⅝	16/-	1¼	25/-
¾	17/-	1½	27/6
1	20/-		

TONGUED AND GROOVED FLOORING.		MATCHING (BEST).	
Inches.	per sq.	Inches.	per sq.
1	21/-	⅝	16/-
1¼	26/-	¾	18/6
1½	27/6	1	22/6

BATTENS.	s. d.	SAWN LATHS.	s. d.
¾ × 2 ..per 100 ft.	2 6	Per bundle	2 3

HARD WOOD.

1 INCH AND UP THICK.

Average price for prime quality	£ s. d.
Dry Austrian Wainscot, per ft. cube	0 15 0
Dry American and/or Japanese Figured Oak, per ft. cube	0 12 0
Dry American and/or Japanese plain Oak, per ft. cube	0 10 0
Dry sq. edged Honduras Mahogany, per ft. cube	0 14 0
Dry log-cut Honduras Mahogany, per ft. cube	0 16 0
Dry Cuba Mahogany, per ft. cube	1 1 0
Dry Teak, per ft. cube	0 14 0
Dry American Whitewood, per ft. cube	0 10 0
Best Scotch Glue, per cwt.	3 0 0
Liquid Glue, per cwt.	4 7 0 to 5 10 0

SLATES.

First quality, slates from Bangor or Portmadoc carriage paid in ful. truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	25 0 0	18 by 10 ..	15 12 6
22 by 12	25 0 0	18 by 9 ..	13 15 0
22 by 11	22 10 0	16 by 10 ..	13 10 0
20 by 12	22 0 0	16 by 8 ..	10 7 6
20 by 10	19 7 6		

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons. Per 1,000 f.o.r. London.

Best machine-made tiles from Broseley or Staffordshire district	£4 7 0
ditto hand-made ditto	5 0 0
Ornamental ditto	5 8 6
Hip and valley tiles (per dozen) { Hand-made	0 9 6
{ Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &C., TO LONDON STATION, PER TON—

R.S. Joists, cut and fitted	£11 0 0
Plain Compound Girders	12 0 0
" Stanchions	15 0 0
In Roof Work	18 0 0

MILD STEEL ROUNDS.—To London Station, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
½ in.	12 0 0	⅝ in. to ¾ in.	10 15 0
⅜ in.	11 0 0	⅞ in. to 2¼ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—

(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Standard Wrot. Mild Steel Tubes and Tubulars Sizes ⅛in. to 6in.	Genuine Wrot. (Puddled) Iron Tubes and Tubulars Sizes ⅛in. to 6in.	Standard Fittings Sizes ⅛in to 6in.	Standard Flanges Sizes ⅛in. to 6in.
	%	%	%	%
Gas	63	52½	57½	70
Water	61½	48½	52½	65
Steam	57½	45	47½	60
Galv. gas	52½	40	47½	60
Galv. water	47½	35	42½	55
Galv. steam	42½	30	37½	50

C.I. HALF-ROUND GUTTERS—London Price ex Works.

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	11d.	1/5	5d.
3½ in.	11½d.	1/7	5d.
4 in.	1/0½	1/9	5d.
4½ in.	1/1½	2/-	6d.
5 in.	1/5	2/2	8d.

O.G. GUTTERS.

3 in.	1/1	1/11	5d.
3½ in.	1/2	1/11	5d.
4 in.	1/2½	2/-	5d.
4½ in.	1/4	2/4	6d.
5 in.	1/6½	2/8	8d.

RAIN WATER PIPES, &C.

Per yd. in 6 fts.	Pipe.	Bends, stock angles, Branches. stock angles.
2 in.	1/3½	1/9 2/7
2½ in.	1/4½	2/- 3/1
3 in.	1/8½	2/6 3/9
3½ in.	2/1½	3/- 4/4
4 in.	2/5	3/7 5/3

Connections—50 per cent. off above prices.
Tonnage allowance—4 ton lots, 5 per cent.
2 ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices ex Works.

	Pipe.	Bends, stock angles.	Branches. stock angles.
	s. d.	s. d.	s. d.
2 in. per yd. in 6 fts.	2 0	1 6½	1 10½
2½ in. "	2 4	1 8½	2 4
3 in. "	2 6	1 10½	2 9½
3½ in. "	2 8	2 4	3 3
4 in. "	3 1	2 7½	3 9

L.C.C. COATED DRAIN PIPES—London Prices ex Works.

	Pipe, angles, stock angles.	Bends, stock angles.	Branches. stock angles.
	s. d.	s. d.	s. d.
3 in. per yd. in 9 ft. lengths	3 10	4 3	7 0
	cwt. qr. lbs.		
4 in. "	1 1 20 ..	5 0	8 9
5 in. "	1 2 22 ..	8 9	15 0
6 in. "	2 0 6 ..	10 3	18 9

Gaskin for jointing 41/- per cwt.

IRON—	Per ton in London. £ s. d.		£ s. d.
Common bars	10 0 0	to	10 10 0
Staffordshire Crown Bars—Good merchant quality	10 10 0	to	11 0 0
Staffordshire Marked Bars	14 0 0	..	15 0 0
Mild Steel Bars	9 0 0	..	10 0 0
Steel Bars, Ferro-Concrete quality, basis price	8 0 0	..	9 0 0
Hoop iron, basis price	11 0 0	..	12 0 0
" Galvanised	27 0 0	..	28 0 0
Soft Steel Sheets, Black—			
Ordinary sizes, to 20 g.	11 0 0	..	11 10 0
" " " 24 g.	12 0 0	..	13 0 0
" " " 26 g.	14 0 0	..	15 0 0
Sheets Flat Best Soft Steel, C.R. and C.A. quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	13 0 0	..	14 0 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	14 0 0	..	15 0 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	17 0 0	..	18 0 0
No. 1 quality £4 per ton extra.			
Flat and Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 9 ft. to 20 g.	13 0 0	..	14 0 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	14 10 0	..	15 10 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	16 0 0	..	17 0 0
Sheets, Galvanised Flat, Best quality—			
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	16 10 0	..	17 10 0
Best Soft Steel Sheets, 22 g. and 24 g.	18 10 0	..	20 10 0
Best Soft Steel Sheets, 26 g.	20 0 0	..	21 10 0
Cut Nails, 3 in. to 6 in.	15 0 0	..	16 0 0
(Under 3 in. usual trade extras.)			

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

COPPER.

	s. d.
Seamless Copper tubes (basis) per lb.	0 9
Strong sheet "	0 10
Thin "	0 11
Copper nails "	1 0
Copper wire "	0 11

PLUMBERS' BRASS WORK.

Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	
29/-	45/-	76/-	153/-	246/-	510/-	per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	
41/6	62/-	92/-	174/-	300/-	588/-	per doz.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. **Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.**

PRICES CURRENT OF MATERIALS—(*contd.*).

RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
39/-	60/-	116/6 per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1½ in.	1¾ in.	2 in.
7/6	11/-	17/-	29/-	36/-	63/- per doz.

BRASS SLEEVES.

1¼ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES S.F.

¼ in.	¾ in.	1 in.	1¼ in.	1½ in.
35/-	56/-	98/-	162/-	228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH GRASS CLEANING SCREW.

1¼ in.	1½ in.	2 in.	3 in.	
8 lbs. P. traps....	33/-	41/-	56/-	101/- per doz.
8 lbs. S. traps....	35/-	45/-	66/-	126/- ,,

TIN.—English Ingots, 1/8 per lb. SOLDER.—Plumber's 9d., Tinmen's 10d., Blowpipe 11d. per lb.

LEAD, &c.

(Delivered in London.)	£	s.	d.
LEAD—Sheet, English, 4 lb. and up	18	15	0
Pipe in coils	15	15	0
Soil pipe.....	22	5	0
Compo pipe	22	15	0

NOTE.—Country delivery, 20s. per ton extra; lots under 3 cwt. 4s. per cwt. extra, and over 3 cwt. and under 5 cwt., 2s. 6d. per cwt. extra. Cut to sizes 4s. cwt. extra.

Old lead, ex London area, at Mills .....per ton £9 5 0

PAINTS, &c.

		£	s.	d
Raw Linseed Oil, in pipes.....	per gallon	0	1	9
,, ,, ,, in barrels	,,	0	1	11
,, ,, ,, in drums	,,	0	2	2
Boiled ,, ,, in barrels	,,	0	2	3
,, ,, ,, in drums	,,	0	2	5
Turpentine, in barrels	,,	0	5	6
,, in drums (10 galls.)	,,	0	5	8
Genuine Ground English White Lead, per ton (In not less than 5-cwt. casks.)		45	0	0

Extra for 1-cwt. kegs over 5-cwt. casks is 5/9 cwt.

GENUINE WHITE LEAD PAINT.

"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5-cwt. lots per ton delivered 63 0 0

Red Lead, Dry (packages extra) ..	per ton	34	0 0
Best Linseed Oil Putty	per cwt.	0	13 6
Size. XD quality	fkn.	0	3 0

VARNISHES, &c.

		Per gallon.		
Oak Varnish	Outside	0	14	0
Fine ditto	ditto	0	16	0
Fine Copal	ditto	0	18	0
Pale Copal	ditto	1	0	0
Pale Opal Carriage	ditto	1	4	0
Best ditto	ditto	1	12	0
Floor Varnish	Inside	0	18	0
Fine Pale Paper	ditto	0	18	0
Fine Copal Cabinet	ditto	1	2	0
Fine Copal Flatting	ditto	1	0	0
Hard Drying Oak.....	ditto	0	18	6
Fine Hard Drying Oak	ditto	0	19	6
Fine Copal Varnish	ditto	1	0	0
Pale ditto	ditto	1	12	6
Best ditto	ditto	1	2	6
Best Japan Gold Size		0	12	0
Best Black Japan		0	10	0
Oak and Mahogany Stain (water)		0	12	6
Brunswick Black		0	7	0
Berlin Black		0	14	0
Knotting (patent).....		1	5	0
French and Brush Polish		0	17	0
Liquid Dryers in Terebene		0	9	0
Cutrass Black Enamel.....		0	7	0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

	Per ft.		Per ft
15 oz. fourths..	2½d.	32 oz. fourths.....	6d.
15 ,, thirds ..	2½d.	32 ,, thirds	8d.
21 ,, fourths ..	3½d.	Obscured Sheet, 15 oz...	3d.
21 ,, thirds ..	3½d.	,, ,, 21 oz...	4½d.
26 ,, fourths ..	4d.	Fluted, 15 oz. 6½d., 21 oz.	9d.
26 ,, thirds ..	5½d.	Em'ld,15 oz. 4½d., 21 oz.	5½d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES. Per ft.

Rolled plate ¼ in.	4½d.
Rough rolled ⅜ in.	5½d.
Rough rolled ½ in.	5½d.
Figured, Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White..	5½d.
Ditto, tinted	8d.
Rolled Sheet	4½d.
White Rolled Cathedral	4½d.
Tinted do.	6½d.

Cast plate is same price as rough rolled.

"VITA" GLASS. Per foot. s. d

Clear sheet—not exceeding 1 foot	1	0
Do. do. 2 feet	1	3
Do. over 2 feet	1	9
Polished plate—not exceeding 1 foot	1	6
Do. not exceeding 2 feet.....	2	0
Cathedral—not exceeding 1 foot	1	0
Do. larger sizes	1	6
Horticultural Sheet and Cathedral "Vita" Glass. Sizes up to 24 inches by 18 inches or not exceeding 3 feet	1	0
3/16 in. Wired Georgian Design. Sizes up to 108 inches long by up to 24 inches wide	2	6

HOUSING PROGRESS IN SCOTLAND

THE following figures show the progress that has been made in State-aided housing schemes in Scotland to January 31, 1933 :—

	Completed.	Under construction.
1919 Act	25,129	—
Do. (by public utility societies)	421	—
Private subsidy schemes (1919 Additional Powers Act)	2,324	—
Slum Clearance Schemes ...	15,404	665
1923 Act :—		
By local authorities ...	4,015	—
By private enterprise ...	24,423	3,605
By public utility societies	80	—
1924 Act :—		
By local authorities ...	61,104	7,612
By private enterprise ...	4,338	1,496
By public utility societies	127	16
1930 Act :—		
By local authorities ...	4,599	7,531
Unallocated houses... ...	152	330
1931 Act :—		
By local authorities ...	—	70
Demonstration houses ...	17	—
Steel houses erected on behalf of Government by Scottish National Housing Company	2,551	—
	144,684	21,325

NEW BUILDINGS

Edinburgh. — BUILDING. — The following petitions were granted warrant by the Dean of Guild Court :—Belwatt Motors—reconstruction at Cadiz-street, Leith; W. and M. Duncan, Ltd.—addition to factory at Beaverhall-road; Alexander Millar—three double villas and four garages at Ettrickgrove; Hepburn Brothers—40 bungalows at Stapeley-avenue; J. Miller—62 houses at Bellevue-road, etc.

Falkirk.—HOUSES.—At Falkirk Dean of Guild Court, plans were passed for the erection of a number of modern flatted houses, involving a total cost of £5,550. The petitioner was Mr. J. G. Callendar, architect, Falkirk, who was granted warrant to erect six flatted houses at Garden-terrace at £3,900, and one flatted house at Camelon-road at £1,650.

Glasgow.—BUILDING.—Plans submitted by the Corporation Housing Department for over 200 houses in various districts of the city have been approved by Glasgow Dean of Guild Court. The Department proposes to erect three-story tenements at Sunnybank-street, Dalmarnock; Church-street and Brighton-street, Ibrox; Norham-street, Crossmyloof; and Lochgilp-street, Maryhill; while two-story cottages will be built at Knightswood. At Dalmarnock provision will be made for 18 houses of two apartments, 57 of three apartments, and 12 of four apartments, while six houses of three apartments and six of four apartments will be built at Ibrox. Twenty-four houses of three apartments will be constructed at Crossmyloof and 12 of two apartments and an equal number of three apartments at Maryhill.

The cottages at Knightswood will include 24 houses of three apartments, 30 of four apartments, and four of five apartments.

Newtown St. Boswells.—HOUSES.—The Roxburgh C.C. are inviting estimates for one double cottage block of four-apartment houses at Appletreehall, and the same at Newtown St. Boswells and Newcastleton.

NEW CINEMAS

Accrington.—Mr. J. R. Ashworth, Peel-street, is the architect for structural alterations at the Princes Theatre, Edgar-street.

Burlesdon Bridge (Hants).—Mr. E. Thompson, of Cowes, Isle of Wight, is stated to be preparing plans for the erection of a cinema near Burlesdon Bridge. Hants C.C. have passed the plans.

Holywood (Co. Down).—Plans are shortly to be submitted to the U.D.C. for a new cinema to seat 400, to be erected on the site of the old R.U.C. Barracks on the Belfast-Bangor road.

Leeds.—Tenders are now under consideration for the carrying out of the first section of the large amusement park scheme at Gledhow Wood-road and Roundhay-road, which includes a cinema theatre, dance hall, ice rink, etc., the cost being estimated at about £200,000. The plans have been prepared by Lt.-Col. James E. Adamson, L.R.I.B.A., 56, Victoria-street, S.W.1.

Mansfield Woodhouse.—Plans have been approved by the U.D.C. for alterations and additions to the Tivoli Cinema, for Messrs. Pitchford and Co., of Langwith.

PATENTS

APPLICATIONS PUBLISHED.*

386,330.—W. W. Triggs (G. Polysius Akt.-Ges.) : Method of firing, roasting and sintering cement.

386,320.—G. Schiff : Construction of built-up hoarding.

386,347.—J. J. Rawlings and Rawlplug Co., Ltd. : Wall plugs.

386,392.—W. W. Triggs (International Fibre Board, Ltd.) : Sound insulation.

386,393.—T. Gare : Strip rubber for non-slipping surfaces.

386,404.—C. Benn & Sons, Ltd., and C. H. L. Benn : Baths.

386,408.—Clarke, Chapman & Co., Ltd., and W. A. Woodeson : Hoisting machinery.

386,413.—Clayton Dewandre Co., Ltd., and M. Payne : Air heaters.

386,428.—D. B. Turner, W. A. Ball, and H. Newsum, Sons & Co., Ltd. : Windows.

386,436.—H. W. Dover : Handrails for staircases.

386,438.—T. A. Heppenstall : Ventilators.

*All these applications are now in the stage in which opposition to the grant of Patents upon them may be made.

Note.—Period for opposition expires March 25, 1933.

BUILDING TRADE WAGES IN SCOTLAND*

Following are grade rates authorised by the Scottish N.J.C. for Building Industry. The bricklayers in the Glasgow district have ½d. per hour extra. Painters, by ruling of the Scottish National Painters' and Decorators' Joint Council, have from January 1 new rates. Grade A towns, 1/6 per hour; Grade B, 1/5; Grade C, 1/4; Aberdeen has a special rate of 1/5½. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classifications ...	A	A¹	A²	A³	B	B¹	B²	B³
Craftsmen	1/6	1/6	1/5½	1/5	1/4½	1/4	1/3½	1/3
Labourers	1/2	1/1½	1/1½	1/0½	1/0½	1/-	/11½	/11½

Aberdeen	A	Dundee	A	Hawick	A³	Perth	A
Airdrie	A	Dunfermline	A	Helensburgh	A	Perthshire	A
Alexandria	A	Dunoon	A	Inverness	B	Peterhead	A
Arbroath	A³	East Lothian	A	Kilmarnock	A	Renfrewshire	A
Ayrshire	A	Edinburgh	A	Kincardineshire	A³	Rothesay	A
Bathgate	A	Falkirk	A	Kinross-shire	A	Roxburghshire	A³
Bo'ness	A	Forfarshire	A³	Kirkcaldy	A	St. Andrews	A
Broughty Ferry	A	Fort William	A	Lanarkshire	A	Selkirkshire	A
Clackmannanshire	A	Galashiels	A³	Leith	A	Stirling	A
Coatbridge	A	Glasgow	A	Midlothian	A	Stirlingshire, West	A³
Dumbartonshire	A	Greenock	A	Motherwell	A	West Lothian	A
Dumfries	A³	Hamilton	A	Peeblesshire	A³	Wishaw	A
Dumfriesshire	A³						

* The information given in this table is copyright. The rates of wages in various towns in England and Wales are given on page 391.

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	8	9
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	3
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

		s.	d.
Portland cement concrete in foundations 1 to 6	per yard cube	24	3
Add if in underpinning in short lengths	" "	5	6
Add if in floors 6 in. thick	" "	2	3
Add if in beams	" "	2	9
Add if aggregate 1 : 2 : 4	" "	9	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	2	0

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	27	0	0
Add if in stocks	"	7	0	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	1	5	0

FACINGS.

Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½

POINTING

Neat flat struck or weathered joint	" "	0	0	3

ARCHES.

Extra only to the price of ordinary brickwork :—				
Fair external in half brick rings	" "	0	0	10
Axed in stocks	" "	0	0	9
Rubbed and gauged jointed in putty camber or segmental	" "	0	6	0

SUNDRIES.

Damp course in double course of slates breaking joint and bedded in Portland cement	" "	0	0	11
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	"	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarter-inch vertical damp course	" "	9	6
Three-quarter-inch on flats in two thicknesses	" "	6	0
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	0

MASON.

		s.	d.
York stone templates fixed	per foot cube	12	9
York stone sills fixed	" "	22	0
Bath stone and all labour fixed	" "	10	6
Beer stone and all labour fixed	" "	15	0
Portland stone fixed	" "	18	9
Chilmark stone fixed complete	" "	17	6

SLATER.

		s.	d.
Welsh 16in. × 8 in. 3 in. lap. including nails	per square	72	9
Do. 20 in × 10 in. Do. Do.	"	80	9
Do. 24in. × 12in. Do. Do.	"	90	0

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per foot cube	4	0
Do. joists	" "	4	6
Do. roofs, floors and partitions	" "	5	0
Do. trusses	" "	7	3

	¾"	1"	1¼"	2"
Deal rough close boarding per sq.	30/-	35/-	43/-	70/-

		s.	d.
Flat centering for concrete floor, including struts or hangers	"	50	0
Do. to beams	per ft. sup.	0	9
Centre for arches	"	1	6
Gutter boards and bearers	"	1	0

FLOORING.

	¾"	1"	1¼"	1½"
Deal-edges shot per sq.	—	38/-	45/-	52/-
Do. tongued and grooved "	—	43/-	50/-	58/-
Do. matchings "	40/-	45/-	—	—
Moulded skirtings, including backings and grounds per ft. sup.	1/4	1/7	1/9	2/3

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	3
Deal cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights, average size		3	6

DOORS.

	1¼"	1½"	2"
Two-panel square framed per ft. sup.	2/1	2/3	2/5
Four-panel Do. "	2/4	2/6	2/9
Two-panel moulded both sides "	2/6	2/9	2/11
Four-panel Do. Do. "	2/9	2/11	3/2

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	12	6

	1"	1¼"	1½"
Plain deal jamb linings framed per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers "	1/2	1/4	1/7
Add if cross-tongued "	2d.	2d.	2d.

STAIRCASES.

	1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. x 1¼ in.	per ft. run	0	9
Mahogany handrail, average 3 in. x 3 in.	" "	6	0
Add if ramped	" "	12	0
Add if wreathed	" "	24	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	15	0
Plain compound girders	"	18	0
Do. stanchions	"	20	9
In roofwork	"	26	6

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/-	1/1	1/3	1/6
Ogee Do. Do.	"	1/2	1/3	1/9	2/3
Rain-water pipes with ears	"	1/3	1/10	—	—
Extra for shoes and bends	each	2/9	3/11	—	—
Do. stopped ends	"	1/1	1/4	1/9	2/6
Do. nozzles for inlets	"	2/2	2/7	3/7	4/-

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	38	0
Do. do. flats	"	37	0
Extra labour and solder in coated cesspools	each	6	9
Welt joint	per ft. run	0	6
Soldered seam	" "	1	3
Copper nailing	" "	0	3

	½"	¾"	1"	1½"	2"	4"
Drawn lead waste perft. run	1/1½	1/4	1/6½	2/5	2/8	—
Do. service "	1/3	1/9	2/-	3/-	—	—
Do. soil "	—	—	—	—	—	5/9
Bends in lead pipe each	—	—	—	—	2/6	6/-
Soldered stop ends "	0/9	1/1	1/6	2/3	2/10	—
Red lead joints "	0/10	0/11	1/2	1/9	2/1	4/3
Wiped soldered joints "	2/3	2/9	3/0	3/10	4/10	6/9
Lead traps and cleaning screws "	—	—	—	10/6	14/-	—
Bib cocks and joints "	6/4	9/7	14/-	—	—	—
Stop cocks and joints "	12/4	14/2	20/8	54/-	—	—

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	0
Do. Do. Sirapite	" "	2	3
Do. Do. Keen's	" "	3	0
Add saw lathing	" "	1	4
Add metal lathing	" "	2	4
(Not including hangers or runners, etc., for suspended ceilings.)			
Portland cement screed	" "	2	2
Do. plain face	" "	3	3
Mouldings in plaster	per 1 girth	0	1
One-and-a-half granolithic pavings	per yard sup.	5	3½

GLAZIER.

		s.	d.
21-oz. sheet plain	per foot sup.	0	6½
26-oz. Do.	" "	0	7½
Obscured sheet	" "	0	8
¼-in. rolled plate	"	0	9
¼-in. rough rolled or cast plate	" "	0	10
¼-in. wired cast plate	" "	1	1

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting, 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	" "	1	2
Preparing for and hanging paper	per piece	2/- to	4/-

*These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers Liability and National Health and Unemployment Act, and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

TRADE NEWS

Building Society Report.

The 58th annual report of the Abbey-road Building Society was presented at Queen's Hall, Langham-place, W., on February 25. Shareholders and depositors now number 233,297, and share capital and deposits amount to £39,115,504. Advances totalling £3,548,690 were made in 1932.

An Appointment.

The management of the Carbolac Mfg. Co., Ltd., has been put into the hands of Mr. K. Gossell, who has been appointed managing director. The company's offices have been transferred to 110, Cannon-street, London, E.C.4. The company are the sole patentees for "Dialastic" road paving material, etc. Mr. G. E. Heyl has been retained by the company as consulting chemical engineer.

Correction.

In the advertisement for Messrs. G. W. Lewis' Tileries, Ltd., which appeared in our issues of January 20 and February 10, it was stated that all the roofs of the Cefn-Coed Hospital are covered with "Rosemary" tiles. This is not correct, as, whilst "Rosemary" tiles were used on a portion of this contract, Messrs. J. W. Greaves and Sons, Ltd., of Portmadoc, supplied half-a-million slates for this job.

Motor Factory Extensions.

The extensions to the Vauxhall factory at Luton, which we illustrate this week, have been due to the fact that for some time demand for Vauxhall cars and Bedford trucks has exceeded output facilities. Immediate delivery of home market orders has been impossible for some little while, and important overseas business has, of necessity, had to be refused. New buildings have sprung up, new machinery is ready for installation, and existing plant has taken its place in a completely-designed scheme to meet the present growing demand for Vauxhall cars and Bedford trucks, and to develop the additional programme which we understand will be undertaken later in the year.

Ilford Town Hall Extensions.

In the description of this building on page 324 of our last issue, we omitted to mention that the solid inlaid letter oak tablets were executed by Messrs. John Daymond and Son, Ltd., 1-7, Edward-street, S.W.1. These tablets, of which there were quite a considerable number, both lettered and numbered, were placed on doors and elsewhere throughout the new building and were specially approved and selected for the purpose by the Borough Engineer and Surveyor. Messrs. Daymond also carried out the wood carving.

In the same connection we are asked to state that Messrs. Hollis Bros. and Co., Ltd., were responsible for the wood block flooring, in addition to the parquet, and that they installed an area of some 4,000 sq. yds. in Burmese Pyinkado and teak wood block flooring.

Messrs. Fenning and Co., Ltd., inform us that the whole of the marble work in the council chamber was supplied and fixed by them, including fourteen fluted Ionic columns in Sienna Brocatelle marble.

Concrete-making Machinery.

It is sometimes held against British manufacturers that in the matter of service they have something to learn from those of other countries. That this is not necessarily so is shown by a transaction in which Messrs. Goodwin, Barsby and Co., Ltd., of Leicester, were concerned. On October 17 an overseas order was received at Leicester for a stone-breaker. The machine was despatched the same day, and, after a journey which included two transhipments and over 7,000 miles transport, was delivered four weeks and three days after receipt of the order. Another interesting case concerns an order for a Good-Win Three-Stage Contraflow Washer to deal with 15 tons per hour. This order was received on Tuesday afternoon, January 17, and the machine was delivered and unloaded at Glasgow on January 21.

NEWS ITEMS

Heating and Ventilating Engineers.

Mr. James Elliott, of 138, Princess-street, Manchester, heating and ventilating engineer, was unanimously elected president of the Institution of Heating and Ventilating Engineers, at their annual meeting on February 8.

Short Courses for Teachers.

The Board of Education Syllabus of the Short Courses for Teachers in Technical Schools, to be held in July and August, is now published (Form 105U, T.i.). Classes on building and painting and decorating will be held in London from July 24 to August 3.

L.C.C. District Surveyors.

The Building Acts Committee of the London County Council recommend the following appointments to London District Surveyorships :—Woolwich, South (Mr. Ronald Cross Griffiths), Hampstead (Mr. David Whyte), and Camberwell, South (Mr. David Williams Pratt). The appointments are to be as from February 11.

Buying British.

Sir William Ray, M.P., leader of the Municipal Reform Party on the London County Council, speaking at Wellington, Salop, recently, said that in the case of the Lambeth Bridge, recently rebuilt by the L.C.C., it would have been possible by using foreign steel and granite for the work to have been done at a saving of about £20,000 in the purchase of this material. The wages, however, paid to British workers as a result of using British steel and granite amounted approximately to £170,000, representing probably the continuous employment of 1,000 people for a year. If foreign steel and granite had been used these workers would have lost their employment, and the cost of maintaining them on the Unemployment Fund or through the Public Assistance Authorities would have been approximately £52,000, or a total sum of £32,000 in excess of that involved through placing the contract at home. Accordingly, the net national saving through buying British was £32,000 instead of an apparent loss of £20,000.

House Property Improvements.

Sir Hilton Young, Minister of Health, speaking before the County Valuers' Association recently, said that the importance of uniformity in valuation had been conspicuously illustrated in the last few days. There was a movement, fostered by the building societies and most sympathetically regarded by the Government, to encourage householders to put in hand improvements in their houses which would give employment to the building trade. The success of that movement seemed to be threatened by apprehensions about valuation. It was a matter of national interest to reduce those apprehensions in every possible way. If structural improvements were undertaken which would add to the letting value of a house, those who were responsible for the making of valuations must, no doubt, take the increased letting value into account but it was represented that there were authorities who went farther than the law required and regarded work which was in the nature of decoration and so forth—work, in fact, which was necessary to obviate a decrease in letting value—as something to be treated as an accretion to assessable value. That would be a misunderstanding of principles. It was misunderstandings of the sort that led to want of uniformity, and the avoidance of such misunderstandings was a fruitful result of the work of bodies such as the County Valuers' Association, and a body with which the Ministry of Health were more directly in contact, the Central Valuation Committee, with whom he was even then in communication on the subject.

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted.*
† Denotes *provisionally accepted.*
‡ Denotes *recommended for acceptance.*
§ Denotes *accepted subject to modifications.*
¶ Denotes *accepted by H.M. Office of Works and H.M. War Office.*

Abergavenny.—Four houses at Llanvetherine, for the R.D.C. :—

*Foster and Hill	£1,192

Ashby-de-la-Zouch.—(*a*) Ten houses at Appleby Magna, (*b*) 20 houses at Coleorton, and (*c*) 20 houses at Worthington, for the U.D.C. Messrs. Goddard & Wain, LL.R.I.B.A., architects, Station-chambers, High-street, Coalville :—

(*a*) *T. Barker & Sons, Ltd., Loughborough	£2,915
(*b*) *G. Lidwell & Son, Coalville	5,806
(*c*) *T. Barker & Sons, Ltd., Loughborough	5,640

Barnsley.—New church hall on the Lund Wood estate. Messrs. Paxton & Hill, architects, Leeds :—

*W. Dunk & Sons, Ltd.	

Barrow.—Alterations at Holker-street school, for the T.C. Mr. W. C. Persey, Borough Engineer :—

*Rainey Bros., Ltd., Barrow-in-Furness	£2,464

Belfast.—Rebuilding of Donegall-street Congregational Church. Mr. J. Seeds, F.R.I.B.A., architect :—

*Stewart & Partners, Ltd., Belfast (approx.)	£17,000

Belfast.—Residence at Dunmurry, for Mr. Dunlop Cunningham. Mr. W. D. R. Taggart, architect :—

*H. Laverty & Sons, Ltd. (approx.)	£3,500

Billericay.—For Foundry Field sewer extension, for the R.D.C. :—

W. J. Pallett, Herongate	£960	2	3
S. E. Moss & Sons, Chelmsford	948	4	0
G. T. Thurgood & Sons, Much Hadham	909	0	0
F. A. Fordham, Laindon	821	0	0
R. Keeble, Billericay	731	19	2
W. Shadbolt, Wembley	685	8	3
Harris Bros., Billericay	664	0	0
W. Connel, Brentwood	615	11	7
V. G. Selwood & Co., Chelmsford	601	11	0
Ed. J. Edwards, Norwich	561	9	10
†R. West, Billericay	546	11	10

Billericay.—Houses, for the R.D.C. Mr. H. B. Mayhew, surveyor :—

13 Houses Gt. Burstead, and 6 houses South Weald—	
W. J. Pallett, Herongate	£8,713 10 0
Wade & Co., Chelmsford	8,526 0 0
R. Keeble, Billericay	7,640 0 0
W. Connel, Brentwood	7,433 0 0
V. G. Selwood & Co., Chelmsford	7,126 0 0
W. A. Mewburn & Co., Harlow	6,988 0 0
S. E. Moss & Sons, Chelmsford	6,880 0 0
G. T. Thurgood & Sons, Much Hadham	6,854 0 0
J. H. Bartlett, Wickford	6,840 0 0
†F. A. Fordham, Laindon	6,796 0 0
13 Houses at Gt. Burstead only—	
D. Panther, Southend	6,987 0 0
W. J. Pallett, Herongate	6,508 16 0
Wade & Co., Chelmsford	6,339 0 0
R. Keeble, Billericay	5,730 0 0
W. Connel, Brentwood	5,602 13 7
Harris Bros., Billericay	5,457 0 0
V. G. Selwood & Co., Chelmsford	5,304 0 0
W. A. Mewburn & Co., Harlow	5,241 0 0
S. E. Moss & Sons, Chelmsford	5,160 0 0
G. T. Thurgood & Sons, Much Hadham	5,142 0 0
F. A. Fordham, Laindon	5,097 0 0
J. H. Bartlett, Wickford	5,070 0 0
R. West, Billericay	5,064 0 0
6 Houses at South Weald only—	
W. E. Powell, Brentwood	2,770 0 0
W. J. Pallett, Herongate	2,204 17 0
Wade & Co., Chelmsford	2,187 0 0
W. Pudney, Ingatestone	1,919 0 0
R. Keeble, Billericay	1,910 0 0
W. Connel, Brentwood	1,831 5 3
V. G. Selwood & Co., Chelmsford	1,822 0 0
B. C. Easton, Wickford	1,810 0 0
J. H. Bartlett, Wickford	1,770 0 0
W. A. Mewburn & Co., Harlow	1,747 0 0
S. E. Moss & Sons, Chelmsford	1,720 0 0
G. T. Thurgood & Sons, Much Hadham	1,712 0 0
F. A. Fordham, Laindon	1,699 0 0

Birmingham.—Pavilion at the Gospel-lane school playing field, for the E.C. :—

*Harrison Smith Buildings, Ltd., Vauxhall, Birmingham	£1,025

Birmingham.—Conversion of latrines and alterations to cloakrooms at Upper Highgate-street Council school, for the E.C. :—

*J. Broomfield & Sons, Birmingham	£256

Birmingham.—Cloakroom and stockroom at Farm-street Council school, for the E.C. :—

*C. Green & Sons, Ltd., Birmingham	£383

Birmingham.—Dairy at Shawbury school, for the E.C. :—
*J. W. Matthews £168

Birmingham.—Reconditioning of conveniences at Nechells Council school, for the E.C. :—
*A. J. Teall & Son, Ltd., Birmingham ... £173

Birmingham.—Additions to works in Kenyon-street, for Messrs. Anstacy & Wilson, Ltd., Kenyon-street. Mr. Peter H. Hing, F.R.I.B.A., architect, 121, Colmore-row :—
*W. J. Whittall & Sons, Ltd., Birmingham.
(Estimated cost: £5,000.)

Blackburn.—10 cottages, together with other works, at the Brockhall Institution, Langho, for the Lancashire Mental Deficiency Acts Committee. Messrs. Rees & Holt, FF.R.I.B.A., architects, 64, Rodney-street, Liverpool :—
*T. Croft & Sons, Ltd., Preston.

Blyth.—Plumbing, slating and plastering 50 small houses for aged couples, for the T.C. :—
Plumbing—*T. Poulter.
Slating—*Nelson & Co.
Plastering—* — Towers.
(All of Blyth.)

Blyth.—Conversion of central premises, formerly the new Delavel and Newcome Co-operative Society, into a bakery for the Blyth Co-operative Society. Plans in Architects' Department, C.W.S., Ltd., Westmorland-street, Newcastle-on-Tyne :—
*Building Department, C.W.S., Ltd., Newcastle-on-Tyne.

Bollington.—16 non-parlour type houses on the Bollington Cross housing estate, for the U.D.C. Mr. A. E. Bradburn, architect, 25, King Edward-street, Macclesfield :—
*J. J. Parrott, Bollington.

Bournemouth.—Bandstand in the Pine-walk, for the T.C. :—
*C. A. Barnes £997

Bournemouth.—51 pairs of non-parlour houses, for the T.C. :—
*A. Schofield £27,366

Bradford.—Alterations at the Yorkshire Penny Bank Offices and Bank-chambers, Manchester-road. Plans by Architects' Department, Infirmary-street, Leeds :—
*W. Nicholson & Sons (Leeds), Ltd., Leeds.

Bradford.—Strong room and vaults to premises in Market-street, for the Bradford Third Equitable Benefit Building Society, 48, Market-street :—
*J. Moulson & Son, Ltd., Bradford.

Bridgwater.—Residence in Taunton-road. Mr. W. L. Andrews, F.R.S.A., architect, Stoke St. Gregory, Taunton :—
*J. Standerwick & Sons, Taunton-road, Bridgwater.

Bridgwater.—Residence and dairy at Bath-road. Dunwear. Mr. W. L. Andrews, F.R.S.A., architect :—
*J. Standerwick & Sons, of Taunton-road, Bridgwater.

Bury.—Reconstruction of Heap Bridge, for the Lancashire C.C. Mr. Peter Schofield, County Surveyor and Bridgemaster, County Offices, Preston :—
*L. Fairclough, Ltd., Adlington, near Chorley.

Carleton.—Twenty pairs of houses at Carleton Crest :—
*A. Gregory & Son.

Castlederg.—Alterations and improvements to fever hospital, for the Board of Guardians :—
*J. J. Laughlin, Castlederg £1,275

Chester.—Alterations to the "Bars Hotel," Foregate-street. Messrs. J. H. Davies & Son, architects, 45, Newgate-street :—
Builders—*J. A. Milestone & Sons, Ltd., Wallasey.
Plastering—*J. B. Johnson & Co., Ltd., Liverpool.
Slaters—*Wormwell, Coventry.
Plumbers and glaziers—*H. Tattersall, Ltd., Rochdale.
Floor and wall tiling—*Bangham & Fleming, Liverpool.

Chesterfield.—Alterations to premises, 12, Corporation-street, for the Halifax Building Society, Ltd. Messrs. Wilcockson & Cutts, architects, 12, Saltergate :—
*A. Hearnshaw, Chesterfield.

Deal.—New shopfront, etc., at 8, Queen-street :—
*Pike & Pettengell, Ramsgate.

Dingle.—Renovation of Dingle Hospital and installation of laundry, for the Kerry County Board of Health :—
Buttimer & Co., Tralee £2,119
*T. Murphy, Dingle 1,949

Docking.—Houses, for the R.D.C. Mr. H. East, architect and surveyor, Heacham, Norfolk :—
Thornham houses—
*J. Groom & Son, Hunstanton £1,716
West Rudham houses—
*J. Groom & Son, Hunstanton £1,716

Doncaster.—Adaptation and the erection of the new wing to the Art School. Mr. H. A. Hickson, architect, Hallcroft-chambers, Hallgate :—
*Pearson and Blackwell.

Dundalk.—59 houses, for the U.D.C.

	Concrete.	*Masonry.*
John McGuinness, Dundalk	£22,423	£1,780
Thomas McDonald & Sons, Castle-road, Dundalk	20,320	885
*P. McKenna & Sons, Seatown-place, Dundalk	18,158	1,390

Durham.—County Public Assistance Committee accepted tenders for various works :—
Alterations to the Chester-le-Street Institution—
W. Norman, Chester-le-Street £255
Renewal of flag floors at the Stockton Institution—
*Walter Bell, Stockton £291

Elham.—Additions to "Newlands House," Swingfield, near Dover, for Mr. G. Godden. Mr. J. Westacott, architect and surveyor for Newlands estate, Elham, Canterbury :—

C. Rice	£246	8	1
J. J. Clayson	192	9	8
F. J. Simpson	189	15	2
G. Boughton	169	2	10
*A. Philpot	162	0	0

Glasshoughton.—For (*a*) 20 houses at Rock Carr-lane and (*b*) 16 houses at Airedale-road :—
(*a*) *A. Gregory & Son.
(*b*) *E. Cockshaw.

Harrogate.—Conversion of premises at Homestead-road into electricity department stores, for the Corporation. Mr. C. E. Rivers, Borough Engineer :—
Bricklayers—*W. Birch & Son.
Joiner—*G. W. Ledger.
Plumber—*W. Bellerby.
Slater—*Wright & Son.
Plasterer—*J. Laycock.
Steelwork—*C. Atkinson & Sons.
(All of Harrogate.)

Hartlepool.—For 17 houses in Hart-road and Hutton-street, for the T.C. Mr. J. H. Miers, Borough Surveyor :—
*T. E. F. Whitear, 3, Harland-place, Norton-on-Tees.

Haslingden.—Alterations to the covered market, for the T.C. Mr. R. Taylor, Borough Surveyor :—
Brickwork—*T. Tattersall, Ltd.
Joiner—*Grindrod & Co.
Painter—*P. McIntyre.
Plumber—*F. Kay.
(All of Haslingden.)

Hinckley.—50 houses on the Middlefield-lane housing estate, for the U.D.C. Mr. J. S. Feathers, surveyor :—
*J. Hobson & Son, Ltd., Nottingham £14,730

Hull.—30 tenement dwellings in New George-street, for the T.C. :—
*Robinson & Sawdon, Ltd. £12,560 0 8

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Ireland.—The following contracts have been placed by the Commissioners of Public Works :—
Dublin Castle, St. Patrick's Hall (re-roofing and plastering)—*Owen Smith, St. Alban's-road, Dublin.
Elly Bay Mass Curing Station, Co. Mayo (reconstruction of former Coastguard Station)—*Charles O'Malley, Westport.
G.H.Q., Parkgate (adaptation works)—*M. Molloy, Kimmage.
Faugher National School, Co. Donegal (new school)—*Hugh Coyle, Cashelmore, Lifford.
Aughawillan National School (erection of school)—*Jas Dorigan, Annagh, Cloone.
Colaiste Caoimhin (new heating station and fuel store)—*Fearon & Co., Ranelagh.
Kilmeedy G.S. (erection of new station)—*J. M. O'Keefe, Mallow.
Shercock G.S. (erection of new station)—*J. Mulholland & Sons, Carrickmacross.
Castletownbere N.S. (erection of school)—*J. E. Holland, Castletownbere.

Keighley.—Reservoir at Highfield, for the T.C. Mr. W. Fowlds, Borough Surveyor :—
*F.C. Construction Co., Derby £1,430

Kells.—6 houses and 4 houses, for the U.D.C. :—
*A. Doyle, Kells £3,081

Kettering.—Extensions to factory in Wellington-street, for Messrs. Seddon & Arlidge, Ltd., printers, Regent-street. Messrs. R. J. Williams & Partners, architects, Market-street :—
*Smith, Edmunds & Co., Kettering.

Kingston-upon-Hull.—Painting of Drypool bridge, North bridge, Scott-street bridge, Sculcoates bridge, Stoneferry bridge, for the T.C. Mr. H. Hamer, City Engineer :—
*James Robb & Co., Newcastle-upon-Tyne £545 16

Kirk Deighton.—Four houses at Kirk Deighton and two at East Keswick, for the Wetherby R.D.C. Mr. H. Smith, clerk :—
Per house.
†Webster & Johnson, Wetherby £300

Leeds.—Alterations and additions at Marsh-lane ice works, for the Leeds Consumers' Ice and Cold Storage Co. Mr. W. Broadbent, architect, Albion-street, Leeds :—
*Wm. Irwin & Co., Ltd.

Leeds.—Reconstruction of shop premises in Kirkgate, adjoining the Theatre-de-Luxe, for the Stylo Boot Co. :—
*Sharp & Law.

Leeds.—Alterations to premises in Albion-street, for Messrs. Legg & Millard, Ltd., 41, Albion-street :—
*Blakey, Ltd., Wakefield.

Leeds.—New bank premises in Stonegate-road, Meanwood, for the Yorkshire Penny Bank, Ltd. Banks' Architects' Dept., 2, Infirmary-street :—
*W. Nicholson & Son, Ltd., Sheaf-street, Leeds.

Leeds.—Alterations to premises in Briggate and Duncan-street, for Messrs. Reid Bros., Norfolk House, Oxford-street, London, W. :—
Shopfitters—*A. J. Gupwells, Birmingham.
Painting and decorating—*W. Tunnicliffe, Bradford.

Leyland.—Club headquarters in Derby-street, for the Leyland and Farington Club. Mr. H. B. Moss, L.R.I.B.A., architect, 4, Hope-terrace, Hough-lane :—
Builders—*H. Brailsford & Sons.
Carpenter and joiner—*H. Threlfall.
Plasterer—*T. Heyes.
Plumbing and glazing—*Pemberton & Price.
(All of Leyland.)

Limerick.—Reconstruction of a separate block of the County Home and Hospital, Limerick, as a tuberculosis institution, for the Limerick County Board of Health :—
*T. Gough, Limerick £8,706

Little Hulton.—54 non-parlour three-bedroomed type houses in Hilton-lane, for the U.D.C. Mr. J. T. Davies, surveyor :—
*J. Gerrard & Sons, Ltd., Manchester.
(In lieu of tender previously accepted.)

Liverpool.—Alterations to motor works in Parr-street (first section), for Messrs. P. E. Matthews & Sons, Ltd., 104, Duke-street. Mr. D. A. Beveridge, F.R.I.B.A., architect, 36, Dale-street :—
*R. Myles, Liverpool.

Llysfaen.—14 workmen's dwellings at Bertyglyd-road, for the Colwyn Bay U.D.C. Mr. W. J. Dunning surveyor :—
*Francis Roberts & Sons, Ltd., Trevor, near Wrexham £5,145

Liverpool.—Additions to works buildings in Stuart-road, Walton, for the British Oxygen Co., Ltd., Knowsley-road, Bootle. Mr. A. E. Shennan, F.R.I.B.A., architect, 17, North John-street :—
*John Rimmer, Liverpool.

Liverpool.—72 type A.760 houses on the Huyton Farm estate (portions Nos. 4 and 5), for the T.C. Director of Housing :—
*Leyland Construction Co., Ltd., Leyland £22,176

Liverpool.—Electric sub-station in Sheil-park, for the T.C. :—
*Rimmer Bros., Dalton-street, Liverpool £549

Liverpool.—Alterations to the Holly Lodge High School, for the T.C.:—
*R. Wearing & Sons £699

Liverpool.—Supply, erection and maintenance at the Oswestry filter beds of a hydraulic turbo-driven booster pump, for the T.C. Water Engineer:—
*Gilbert Gilkes & Gordon, Ltd., Kendal £1,400 10

Liverpool.—Various works, for the T.C.:—
New pathological laboratory at Smithdown-road Hospital—
*Hughes & Holden, Ltd., Liverpool ... £234
New bio-chemical laboratory at Mill-road Infirmary—
*G. & G. L. Deseer, Ltd., Liverpool ... 967

Liverpool.—Steel library shelving in the library portion of the basement storage accommodation under the Walker Art Gallery extension, for the T.C.:—
*Milners' Safe Co., Ltd., 49, North John-street, Liverpool £319 5 6

Liverpool.—48 type A.620 houses, 126 type A.710 houses and 63 type A.760 houses on the Huyton Farm estate, for the T.C. Director of Housing:—
*Middleton & Co. (Blackpool), Ltd., Banks-street Sidings, Blackpool ... £70,380

Liverpool.—Maintenance depot on the Dovecot estate, for the T.C. Director of Housing:—
*Unit Construction Co., Ltd., Adelphi-terrace House, 1, Robert-street, London, W.C.2 ..... £2,147

Liverpool.—Conveniences in St. John's-lane, for the T.C.:—
*S. Powell & Son (Liverpool), Ltd., 39, Rose-place, Liverpool £5,438 10

London.—Heating installation for the engine-house at Brixton works, for the M.W.B.:—

Norris Warming Co., Ltd.	£322
G. N. Haden & Sons, Ltd.	321
Haywards, Ltd.	310
H. W. Dutton & Co., Ltd.	308
Chas. P. Kinnell & Co., Ltd.	300
*J. McKenzie	249

London.—Heating installation for certain buildings adjoining the new turbine house at the Surbiton works, for the M.W.B.:—

Norris Warming Co., Ltd.	£482
Haywards, Ltd.	450
H. W. Dutton & Co., Ltd.	443
*Chas. P. Kinnell & Co., Ltd.	320

London.—Terrazzo and vitreous tiling at the new Poplar Baths, for the Poplar B.C.:—
*Marbello & Durus, Ltd., Crescent Wharf, Birmingham £1,334 12 1

¶London.—Tenders accepted by H.M.O.W. for the week ended February 23:—
Beaconsfield Post Office—erection of garage—A. Bedford, 19, Melbourne-parade, Palmers Green, N.13.
Bridgwater district—execution of ordinary works and repairs—H. W. Pollard & Sons, Bridgwater.
King's Lynn district—execution of ordinary works and repairs—R. W. Fayers & Sons, 1, Kingstaithe-square, King's Lynn.
Geological Museum, S. Kensington, S.W.—balustrading—G. Johnson Bros., 69, Old-street, E.C.1.

London.—Providing and driving the piles for the foundation of the new river wall between Bell-water Gate and the Royal Arsenal, for the Woolwich B.C.:—

G. D. Shellabear	£3,269 19 6
Holloway Bros.	2,944 0 0
A. E. Farr	2,724 2 6
Simplex Concrete Piles, Ltd.	2,683 10 0
G. Tate & Son	2,620 7 2
J. L. Kier & Co., Ltd.	2,443 6 4
Chafen & Newman, Ltd.	2,409 13 9
John Gill Contractors, Ltd.	2,368 11 0
J. Shelbourne & Co., Ltd.	2,110 14 6
Christiani & Nielson, Ltd.	2,060 4 10
*W. & C. French, Ltd.	1,786 18 3

London.—Repairs, etc., to the brickwork of the vaults and arches beneath London Bridge Approach, for the City Corporation:—

John Mowlem & Co., Ltd.	£584 0 0
Holland & Hannen & Cubitts, Ltd.	530 10 0
W. H. Wagstaff & Sons	310 0 0
W. E. Hargrave & Sons	278 15 3
*F. J. Howard	277 7 9

London.—Supplying and fixing the terra cotta work at the new frontage elevation to the Turkish Baths, Plumstead High-street, for the Woolwich B.C.:—
*Hathern Station Brick & Terra Cotta Co. £293 5

Lutterworth.—6 houses at Ullesthorpe, for the R.D.C.:—
*F. Cooke & Co., Broughton Astley ... £1,766

Macclesfield.—120 houses on Moss Lane estate, for the T.C. Mr. Edward Hamson, Borough Surveyor:—
*Kearton & Jones, Congleton £32,938

Manchester.—For (*a*) 282 houses on Benchill estate, Wythenshawe; (*b*) 408 houses on the Brownley Green estate, Wythenshawe; (*c*) 204 houses on the John Heywood-street estate, Clayton; and (*d*) plumbing work on houses, for the Corporation. Mr. G. Noel Hill, F.R.I.B.A., City Architect:—
(*a*) and (*b*) *McKeand, Smith & Co., Ltd., 64, Manor-road, Friar Park, Wednesbury.
(*c*) *W. Townson & Sons, Ltd., Park Hill-street, Bolton.
(*d*) *A. Scull & Son, Ltd., Bristol.

Manchester.—Workshops and store, Hamilton-road, Hyde-grove and Hawkhurst-road, Rusholme, for Mr. E. Marks, Store-street. Mr. H. Rhodes, A.M.S.A., architect, 90, Deansgate:—
Builders—*Henry Green & Son.
Steelwork—*Edward Wood & Co., Ltd. (Both of Manchester.)

Manchester.—Additions to Dye Works, Clayton-lane, Clayton, for Messrs. George Chadwick & Co. Mr. J. A. Hoyland, L.R.I.B.A., architect, 167, North-road, Clayton:—
*Buirlding Department, George Chadwick & Co., Manchester.

Manchester.—Shop premises on Barlow Moor road, for Mr. J. Taylor. Mr. A. McDonald, architect, 71, Meadow-street, Moss Side:—
*J. R. Aspden & Son, Manchester.

Manchester.—Seven lock-up shops in Levenshulme-road, Gorton, for Mr. F. Holden, 14, Healdplace, Rusholme. Mr. A. McDonald, architect, 71, Meadow-street Moss Side:—
*Tooth Bros., Manchester.

Mayo.—Extensions at county surveyor's office, for the C.C.:—

Christopher O'Malley	£530
J. P. McCormack	510
T. J. McGowan	489
*J. Chambers, Castlebar	460

Middlesbrough. — Extensions at Marton-grove school on the Marton Grove Housing estate, for the E.C. Mr. P. B. Haswell, architect:—
*R. G. Tarran £19,900

Midleton.—26 houses, for the U.D.C.:—
*J. J. Coffey £8,091

Monkseaton.—New church. Mr. A. K. Tasker, architect, Trinity Buildings, New Bridge-street, Newcastle-on-Tyne:—
*Spears, Glasgow.

Newcastle-on-Tyne.—Sub-trades have been placed in connection with the building of new premises for the Y.M.C.A Club. Mr. J. W. Taylor, architect, St. John-street:—
General contractors—*J. Jackson, Corporation-street, Newcastle.
Painting—*R. Robertson, Newcastle.
Slating—*J. Hewitson, Newcastle.
Plumbing and heating—*Executors of Matthew Charlton, Newcastle.
Fire escapes—*Aynesly & Sons, Newcastle.

Newcastle-on-Tyne.—Garage in Chillingham-road, for Mr. E. Graham. Messrs. Marshall & Tweedy, architects, Mervyn House, Pilgrim-street, Newcastle:—
*J. R. Rutherford & Sons, Minories, Jesmond, Newcastle.

Nottingham.—New staff home at Bagthorpe Institution, for the T.C.:—
*R. Hustwayte, Haydn-road, Nottingham £12,487

Nottingham.—Three stands, club premises, construction of track, etc., at Greyhound Racing Course, Trent-lane, for the White City (Nottingham), Ltd., Friary Chambers, Friary-street. Mr. H. A. Dickman, architect, 1, King's-walk:—
*W. H. Blake & Co., Ltd., Sheffield.
*Hodson & Son, Nottingham.

Royston.—Conversion of existing buildings into assembly rooms in High-street. Mr. J. R. Wilkinson, architect, 15, Regent-street, Barnsley:—
*E. Oakland & Co., Ltd., Wombwell, near Barnsley.

Runcorn.—Primary school in Halton-road, for the Cheshire E.C. Mr. F. Anstead Browne, F.R.I.B.A., architect, The Castle, Chester:—
*H. Fairclough, Warrington £3,700

Sheffield.—Church of St. Christopher, Bellhouse-road, Lower Shiregreen, for the Bishop of Sheffield and Ecclesiastical Commissioners. Mr. S. Welsh, architect, The University:—
*M. J. Gleeson, Ltd., Sheffield.

Sheffield.—Extensions to the City General Hospital at Firvale, for the T.C. Mr. W. George Davies, F.R.I.B.A., city architect:—
*W. G. Robson

Shepton Mallet.—48 houses, for the U.D.C.:—
*J. Standerwick & Sons £14,604

Shrewsbury.—Additional classrooms at Monkmoor senior school, Racecourse-crescent, for the T.C. Mr A. W. Ward, borough surveyor:—
*P. Blakemore, Shrewsbury £932

Sittingbourne.—120 houses on the Bobbing-road site, for the T.C.:—
*G. Lewis & Son, Ltd., Dover £34,674

Sligo.—52 houses at Cleveragh, for the Corporation:—

Owen Larkin, Ballinasloe	£15,056
F. Pryor, Ballinamore	20,660
P. J. Murphy, Athlone	19,758
J. Molloy & Sons, Ballina	18,366
*Kilcawley, Moloney & Taylor, Ballisodare	15,163

South Mimms.—Erection of Mutton-lane school, for the Middlesex C.C. Mr. W. T. Curtis, F.R.I.B.A., County Architect, S.W.1:—

Mattock Bros., Wood Green	£9,257
J. Stewart & Sons, Ltd., Tottenham	8,837
Y. J. Lovell & Son Gerrard's Cross	8,747
A. Fairhead & Sons, Ltd., Enfield	8,686
C. Miskin & Sons, Ltd., St. Albans	8,668
G. Groves & Sons, Tottenham	8,567
H. E. Winskell, Barnet	8,539
L. & W. Whitehead, Ltd., S.W.9	8,485
Newby Bros., Ltd., Southgate	8,465
A. Monk, Edmonton	8,394
W. S. Try, Uxbridge	8,219
‡J. Laing & Son, Ltd., Mill Hill	8,206

South Shields.—Extensions to Ingham Infirmary. Messrs. Cackett, Burns, Dick & McKellar, architects, 21, Ellison-place, Newcastle:—
General contractors — *Gustavus Bailey, Ltd., South Shields.
Plumbers—*Law, Barber & Co., Ltd., Simon-street, Tyne Dock.
Plasterers—*Newman Bros., 70, Gloucester-street, Newcastle.
Slaters—*Nelson & Sons, South Shields.
Painters—*J. Miller, South Shields.
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*J. Sumner & Co. (Contractors), Ltd., 157, Shaftesbury-avenue, Southend-on-Sea.

Southend-on-Sea.—Sports pavilion and conveniences on the site of the playing fields at Southchurch, for the C.B.:—
‡Ventris & King, Ltd., Southend-on-Sea £475

Stoke-on-Trent.—52 houses on the Meir (No. 3) site, for the T.C.:—
*McKeand, Smith & Co., Ltd., Wednesbury £16,172

Stoke-on-Trent.—56 houses (fifth contract) on the Carmountside site, for the T.C.:—
*W. J. Simms, Sons & Cooke, Ltd., Nottingham £17,412

Stoke-on-Trent.—Methodist central hall, at Stafford-street, Longton, for the Trustees of the Methodist Church. Messrs. Arthur Brocklehurst & Co., F.R.I.B.A., architects, Martins Bank-buildings, 10, Norfolk-street, Manchester:—
*J. & F. Wootton, Ltd., Bloxwich. (Estimated cost, £17,150.)

Sunbury-on-Thames.—Electrical wiring of 24 houses in Charlton-road, for the U.D.C. Mr. Harold F. Coales, surveyor:—
*Sedgley & Edgley, Walton-on-Thames £94

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Sunderland.—Alterations to the caretaker's house at the Ryhope Secondary School, for the T.C.:—
*J. Carter & Sons, Sunderland £122

Swinton.—Reconstruction of Underline bridge between Swinton and Wath-on-Dearne, for the L. & N.E. Rly. Co., Ltd.:—
*S. Butler & Co., Ltd.

Tewkesbury.—Ten houses at Priors-park, for the T.C.:—
*Lewis & Wild, Powick, near Worcester £2,923 2

Walsall.—Club headquarters in Dudley-street, Vicarage-place and Vicarage-street, for the Service Memorial Club (Walsall), Ltd., 16, Vicarage-place. Hon. Secretary, A. Rowley. Messrs. Jeffries & Shipley, architects, Kingscourt Bridge-street:—
*Thompson & Arblaster, Walsall. (Estimated cost, £3,000.)

Walsall.—Bridge in connection with St. Paul's-terrace extension, for the T.C. Mr. J. Taylor, Borough Engineer:—
*E. C. & J. Keay (1926), Ltd., Darlaston.

Wallsend-on-Tyne.—Garage, mess-rooms, etc., in North-road, Wallsend, for the Co-operative Laundries, Ltd. C.W.S. Architect's Dept., 90, Westmorland-road, Newcastle:—
*C.W.S. Building Dept., West Blandford-street, Newcastle.

Warmley.—Six houses at Mangotsfield and four at North Common, for the R.D.C. Mr. W. H. Knee, architect:—

	Mangotsfield.	North Common.
H. P. Turner, Winterbourne	£316 0	£330 0
H. & J. Lemon, Westerleigh	*286 0	286 0
W. J. Hembrough & Sons, Warmley	294 0	294 0
H. & E. J. Gully, Longwell Green	—	314 0
Willmott Bros., Cockroad, Kingswood	290 0	290 0
R. W. Preddy & Son, Soundwell	308 6	310 —
Jos. Gunning & Sons, Warmley	—	*284 10

West Lancashire.—Two cottages in Liverpool-road, Bickerstaffe; 8 in Church Road, Bickerstaffe; 22 in Cunscough-lane, Melling; 4 in Tootle-lane, Rufford; 6 in Hurlston-green, Scarisbrick; 4 in Snape Green, Scarisbrick; and 4 in Hall-lane, Simons Wood, for the R.D.C. Mr. R. Rosbotham, surveyor, Derby-street, Ormskirk:—
*D. Cooper, Clarence-street, Warrington.
*Billington & Fletcher, Stanley-street, Burscough.
*T. Dickinson & Sons, Upholland.
*R. Lloyd & Son, Southport.

Westcliff-on-Sea.—Public conveniences at Hamlet Court-road North, for the T.C.:—
*A. D. Jackson & Son (Contractors), Ltd., 7, Bournemouth Park-road, Southend-on-Sea.

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McNally, Dublin	45,631 0 0
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T. & G. Crampton, Dublin	43,240 0 0
Murphy Bros., Rathmines	42,850 0 0
Leonard & Fitzgerald, Dublin	42,675 11 6
W. & A. Roberts, Dublin	41,498 0 0
W. & J. Bolger, Dublin	41,114 18 0
G. & P. Walsh, Dublin	40,450 0 0
P. O'Reilly, Killucan	39,950 0 0
Alex Hull & Co., Dublin	39,945 0 0
*J. & R. Thompson, Fairview, Dublin	37,472 0 0

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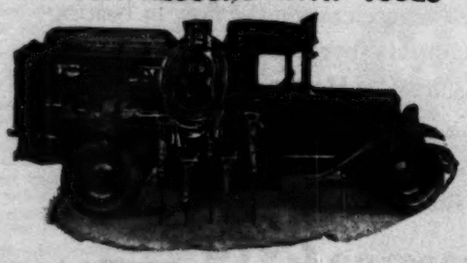
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